2007 COMPUTERWORLD HONORS PROGRAM
One IT manager described a project as 'a noble cause.' Another said his workers had never been 'so engaged on anything before.' Read about them and this year's other honorees. **PAGE 8**

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JUNE 11, 2007 ■ VOL. 41 ■ NO. 24 ■ $5/COPY

Microsoft Gains Political Edge In ODF Battles

Bills requiring open document formats fail in five states after heavy lobbying

BY ERIC LAI AND GREGG KEIZER

A bill introduced last week in the New York legislature would require the state's IT director to study the issue of using open document formats within government agencies. If the measure passes, New York will become the latest state to consider the idea of moving away from Microsoft Corp.'s proprietary Office formats.

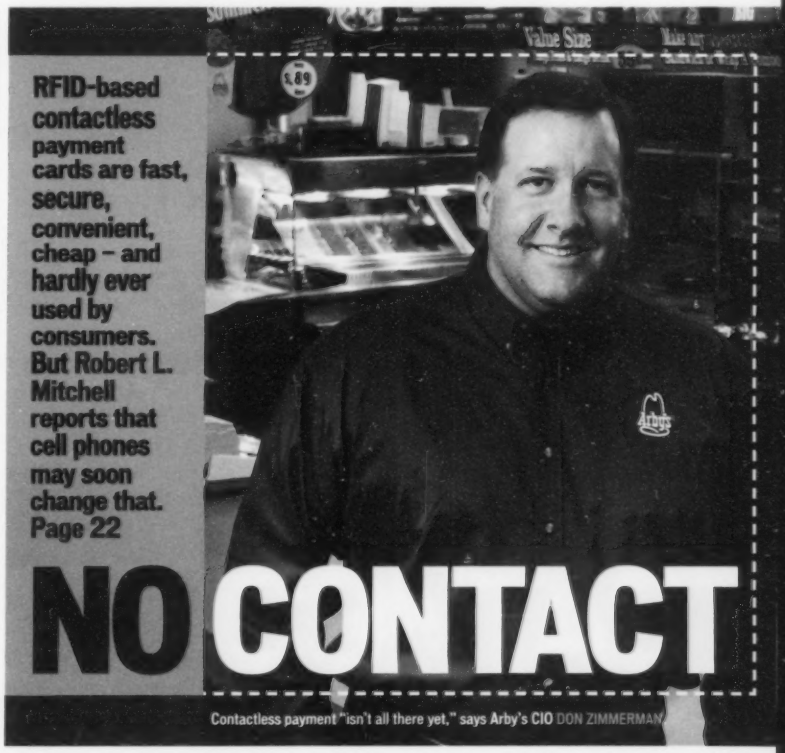
But in a resounding victory for Microsoft, bills seeking to mandate the use of open formats have been defeated or shelved in five states, and only a much-watered-down version of such legislation was signed into law in a sixth state.

The proposals were backed by supporters of the Open Document Format for Office Applications, including IBM and Sun Microsystems Inc. Nonetheless, a bill that was introduced in Connecticut met a quick death earlier this year. And in Florida, Texas and Oregon, would-be laws were all killed off within the past month while being debated in legislative committees, following heavy opposition from Microsoft lobbyists and allies.

> "I wouldn't know an open document format if it bit me on the butt. [Deciding technical standards] is not our job."
>
> DON BETZOLD, STATE SENATOR WHO SPONSORED MINNESOTA'S OPEN FORMATS BILL

The most recent defeat occurred late last month in California, where a toned-down version of a bill in favor of open formats was declared to be stalled in the state assembly's appropriations committee. That happened despite the fact that the bill's sponsor — Mark Leno, a Democratic assemblyman from San Francisco —

ODF, page 14



RFID-based contactless payment cards are fast, secure, convenient, cheap – and hardly ever used by consumers. But Robert L. Mitchell reports that cell phones may soon change that. Page 22

NO CONTACT

Contactless payment "isn't all there yet," says Arby's CIO DON ZIMMERMAN

School IT's Assignment: Obey E-discovery Rules

Districts face heavy summer workload to comply with new federal regulations

BY BRIAN FONSECA

School districts nationwide face a difficult IT assignment this summer: to create systems that ensure they are compliant with new federal regulations on electronic discovery.

Updates to the Federal Rules of Civil Procedure, which took effect last December, require that electronic documents — including e-mail and perhaps even instant messaging logs — be available as evidence in civil court cases. Some legal observers noted that they expect widespread enforcement of the rules to begin by the end of this year.

Jay Attiya, K-12 manager of information systems for the Middletown Township School District in Monmouth County, N.J., said that archiving all electronic data could prove especially difficult for small IT organizations in regional or local school districts.

"By and large, in the past [the FRCP] rules really didn't pertain to us as they did to the Enrons of the world," Attiya

E-discovery, page 44

NEWSPAPER

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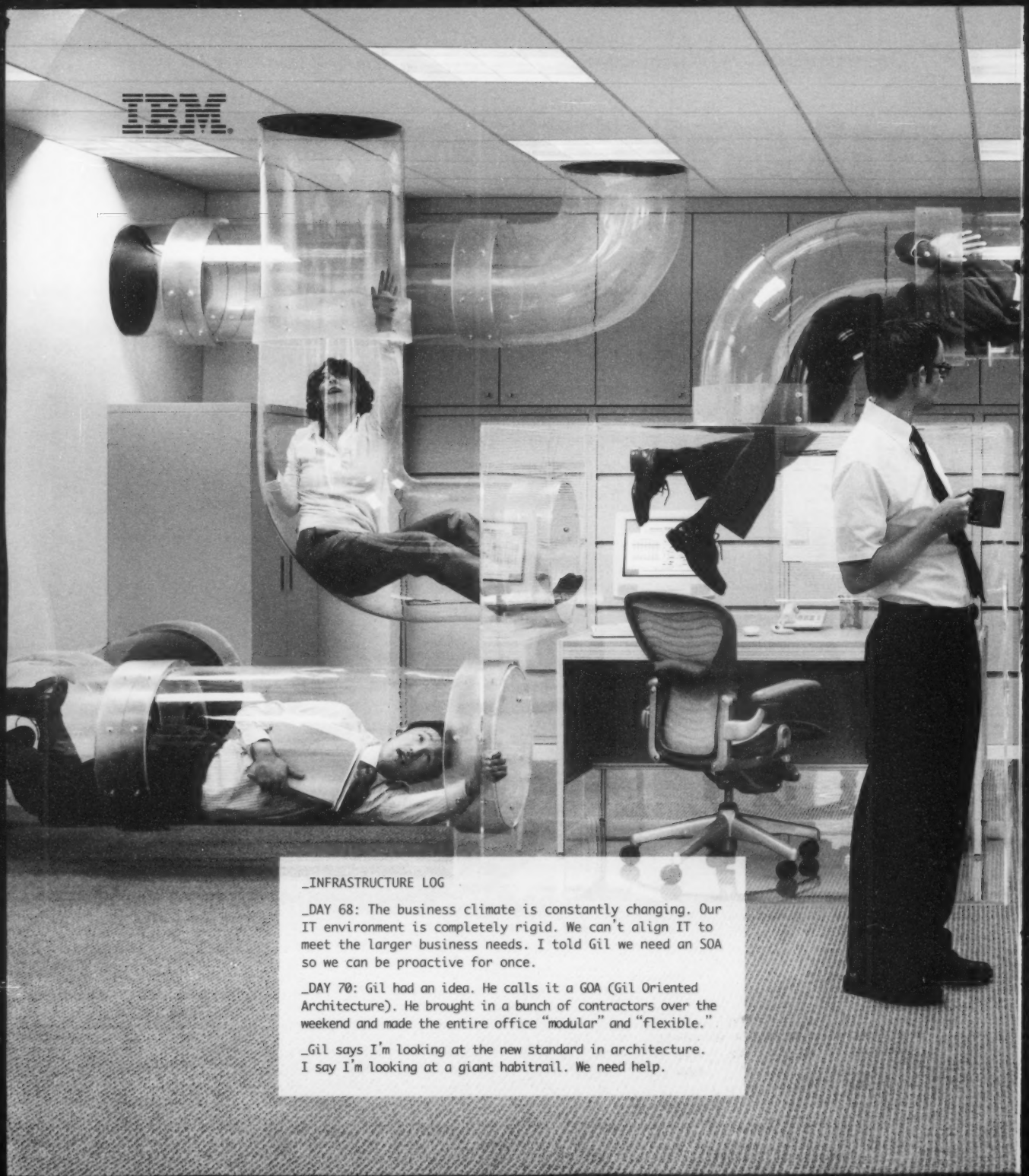

_INFRASTRUCTURE LOG

_DAY 68: The business climate is constantly changing. Our IT environment is completely rigid. We can't align IT to meet the larger business needs. I told Gil we need an SOA so we can be proactive for once.

_DAY 70: Gil had an idea. He calls it a GOA (Gil Oriented Architecture). He brought in a bunch of contractors over the weekend and made the entire office "modular" and "flexible."

_Gil says I'm looking at the new standard in architecture. I say I'm looking at a giant habitrail. We need help.

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10 A credit union in Massachusetts sends TJX an invoice for $590,000 to cover the monetary costs and damage to its reputation that the financial institution says it incurred as a result of the data breach that the retailer disclosed in January.

14 Only a fraction of the Massachusetts government's PCs are equipped to use open document formats at this point, despite a policy requiring state agencies to adopt such formats.

16 The Grill: Ubuntu Linux founder Mark Shuttleworth talks about his passion for bringing free software to the masses, cultural tidal waves and building rockets in his parents' kitchen.

18 Global Dispatches: The Royal Bank of Scotland blames hardware problems for an IT shutdown; and a staffing firm in Australia installs an ERP system after making seven acquisitions.

44 At its Rational user conference this week, IBM will announce a technology called Jazz, as well as a developer community and the first Jazz-based product.

STRATEGIES & TACTICS

How to Build a Talent Factory

Growth in the global marketplace depends on putting the right people in the right places fast. Douglas A. Ready talks about the companies that do it best — and what separates them from the rest.

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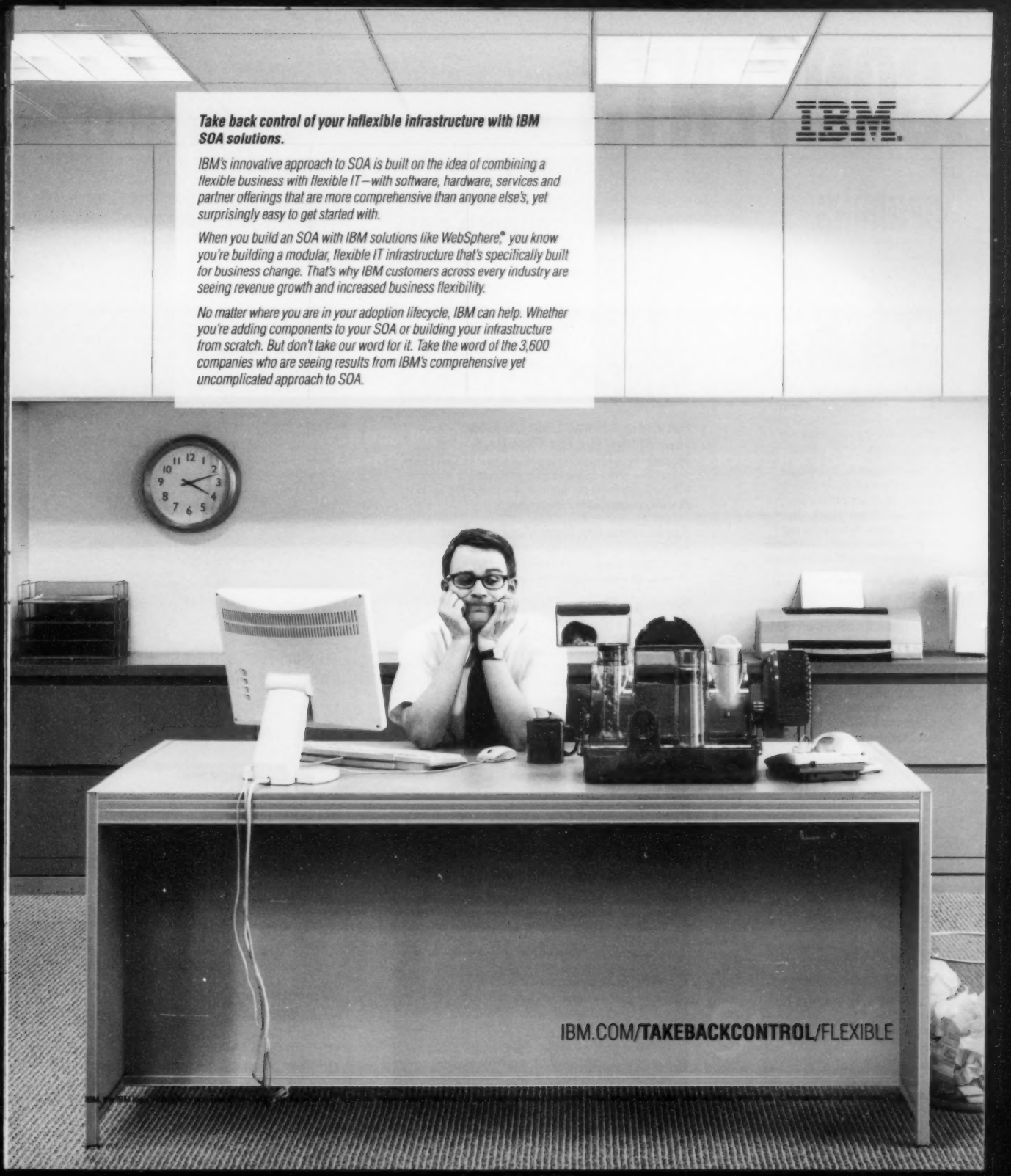
32 Urban League. A look at hiring trends and work environments at companies on *Computerworld*'s Best Places to Work in IT list. In this week's installment, we see that companies in the mid-Atlantic region capitalize on their cosmopolitan connections.

22 No Contact. Contactless payment cards use RFID technology to provide faster, more secure transactions. But three years after the first pilots, the cards have yet to get off the ground with merchants and consumers. Cell phones may come to the rescue.

34 Career Watch. We take a look at where the IT jobs are — globally; the skills gaps that CIOs notice among their staffers; and what not to put on your résumé (example: "We stole a pig, but it was a really small pig"). Plus, EMC CIO Mark Quigley offers some advice for getting a job in IT security.

38 Security Manager's Journal: Drawn to Vegas by Virtualization. Mathias Thurman can't say no when his boss offers to send him to Interop, where he gets the scoop on the security implications of virtualization and configuration management databases.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20 **John D. Halamka** has taken a close look at operating systems and thinks 2008 may be the tipping point for open-source OSs on the desktop.

21 **Michael H. Hugos** explains how BPM can differentiate companies in today's fiercely competitive global economy.

40 **Bart Perkins** says that fuzzy RFPs create misunderstandings that waste time, money, effort and sometimes political capital. Achieving clarity is well worth the effort.

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COMPUTERWORLD.COM THIS WEEK

MOST-READ STORIES

Surviving a Home Data Disaster: How Shirley Got Her Files Back

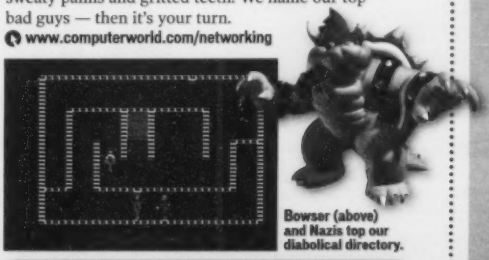
STORAGE: Recovering 736 missing digital images can be arduous — and expensive. *Computerworld*'s Robert L. Mitchell discovers the right (and wrong) way to do it.
www.computerworld.com/storage

Apple Turns Out New MacBook Pros

MACINTOSH: The laptops feature Intel's latest Santa Rosa chip set and — in its 15-in. models — LED-backlit screens. www.computerworld.com/mac

Gaming's 'Baddest' Villains

NETWORKING & INTERNET: We've all gone pixel-to-pixel with some digital disputant who's driven us to sweaty palms and gritted teeth. We name our top bad guys — then it's your turn.
www.computerworld.com/networking



Bowser (above) and Nazis top our diabolical directory.

SHARK BAIT BETA

Need a place to vent about IT? Have a story to share? Submit your own "baits" for points, and rate other baits. Leave comments, build your profile, or try to become one of the big fish. Get started at http://sharkbait.computerworld.com.

A T-1 Isn't as Fast As You Think

Boss decides that 50GB of important data needs to reach corporate headquarters ASAP. The route he chooses? A single T-1 line. Five weeks later . . .
http://sharkbait.computerworld.com/?q=node/1069

BLOG SPOTLIGHT

Sayonara, Creativity?

Because of its openness, the Internet has become history's largest innovation engine. But if former AT&T chairman Ed Whitacre and his successor have their way, Net neutrality – and innovation – will be a thing of the past, blogs Preston Gralla.
www.computerworld.com/blogs/node/5641

Data Center in a Box – Really?

SERVERS: Preconfigured containers offer resource-constrained companies a viable option.
www.computerworld.com/servers

Storage 2.0: Web-based Storage Is Coming

STORAGE: If promising new Web-based storage technologies deliver, they could reduce corporate reliance on higher-priced, proprietary systems.
www.computerworld.com/storage

Beyond iPhone: The Top Five Gadget Trends of 2007

MOBILE & WIRELESS: As the wait for Apple's iPhone reaches a fevered pitch, here are five trends in gadgets that may be even more important — and a few highly touted ideas that may not make it.
www.computerworld.com/mobilewireless

Nokia N95

A Look Inside Google Gears

DEVELOPMENT: Google Gears aims to help developers build Web applications that work even when their users are offline. Here's how the tool works, and the history behind it.
www.computerworld.com/development

Book Excerpt: Privacy on the Line

SECURITY: Whitfield Diffie, co-inventor of Diffie-Hellman public key cryptography, and Sun engineer Susan Landau look at the politics of wiretapping and encryption.
www.computerworld.com/security

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IT Users Make Noble Causes Achievable

Ten organizations receive awards for projects that focus on more than profits or cost savings

BY PATRICK THIBODEAU
WASHINGTON

THE NAVAJO Nation falls between West Virginia and South Carolina in terms of total land area. But its 27,000 square miles are home to only about 250,000 people, many of whom are still waiting for a chance to access the Internet.

If all goes as planned, they won't have to wait much longer. Harold Skow, director of IT for the Navajo Nation, is leading a multiyear project to bring Internet access and modern communications services to the residents of the tribal nation, which is located in parts of Arizona, Utah and New Mexico.

It's an undertaking that Skow sees as being indispensable to economic development within the Window Rock, Ariz.-based nation and to its very future.

"The ultimate goal is to invest in our children," he said at the 2007 Computerworld Honors Program awards ceremony here last week. "We want to be able to create an opportunity for all our children so that they can have access to the Internet. They are our future leaders."

The project involves the deployment of an integrated network that includes a voice-over-IP infrastructure and also supports data and video transmissions. The VoIP system became operational in February 2006, but the project is scheduled to take two more years to complete.

The network, which is based on unified communications technology from Cisco Systems Inc., will link the Navajo Nation's 110 chapter houses, or community centers, to the Internet. Telemedicine, distance learning and other videoconferencing applications will be possible, according to Skow. And the nation's IT department is developing a Web portal to give residents access to e-government and job search services, among other features.

THE COMPUTERWORLD HONORS PROGRAM

The net result will be to enable the tribal nation's population to finally participate in the global Information Age. "It is a noble cause," Skow said.

Because of the networking project, the Navajo Nation was chosen by an independent panel of IT executives as this year's recipient of the Honors Program's 21st Century Achievement Award in the government category. That made the nation one of 10 organizations to be recognized for using technology to promote social, educational or economic advances.

The recipients were chosen from among 50 finalists — five in each of the 10 categories. The finalists had come from a group of 234 companies and organizations that were designated as 2007 Honors Program laureates after submitting case studies about technology proj-

TECH ACHIEVERS

The recipients of this year's 21st Century Achievement Awards include the following companies and organizations, listed by category:

Business & Related Services: QLIKTECH INTERNATIONAL AB. QlikTech, which was founded in Sweden and now is based in Radnor, Pa., has developed data visualization software with in-memory data loading and manipulation capabilities for business intelligence applications.

Education: DEFENSE ACQUISITION UNIVERSITY. A unit of the U.S. Department of Defense in Fort Belvoir, Va., the DAU has created an enterprisewide data mart that combines information from more than 40 previously disconnected data sources.

Environment, Energy & Agriculture: BP PLC. The London-based energy company built a "hurricane management system" in an effort to enable its operations in the Gulf of Mexico to track weather patterns and company assets so it can maximize production and increase employee safety.

Finance, Insurance & Real Estate: ADVANCE AMERICA. Formally known as AARC Inc., the Spartanburg, S.C.-based provider of payday cash-advance services installed a grid computing system that uses the Web to link each of its more than 2,600 retail offices to a consolidated database and applications platform.

Government: THE NAVAJO NATION. The Navajo Nation's IT department is deploying an integrated network that provides Internet access and voice, video and data services to the Window Rock, Ariz.-based nation's 110 chapter houses.

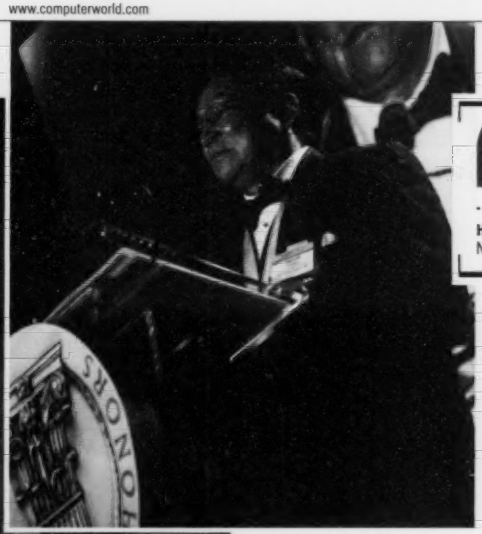
Health Care: THE DANISH NATIONAL E-HEALTH PORTAL. Developed jointly by various government agencies and health care organizations in Denmark, the portal, at *www.sundhed.dk*, enables Danish citizens and health care professionals to communicate and collaborate with one another via a single Web-based interface.

Manufacturing: VARIAN MEDICAL SYSTEMS INC. The Palo Alto, Calif.-based maker of medical equipment has developed technology for delivering an advanced form of radiation therapy treatment to cancer patients, expanding the number of tumors that can be treated via radiation.

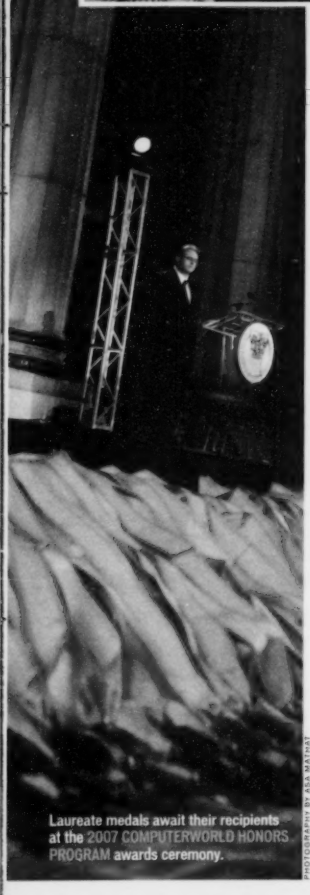
Media, Arts & Entertainment: THE J. PAUL GETTY TRUST. The trust, based in Los Angeles, is using a suite of Web-based systems to make information about art widely accessible and to promote standards, best practices and tools for creating, preserving and delivering the information electronically.

Nonprofit Organizations: MEDICAL MISSIONS FOR CHILDREN. The Paterson, N.J.-based organization uses a telemedicine network with video collaboration capabilities to help improve the care available to children who have severe medical conditions and live in areas worldwide that are underserved by health care professionals.

Transportation: TRANS LINK SYSTEMS BV. Founded by the five major public transportation operators in the Netherlands, Amersfoort-based Trans Link has built and will operate a countrywide electronic ticketing and payment system for train, tram, bus and ferry passengers.



> **The ultimate goal is to invest in our children.**
>
> **HAROLD SKOW,** DIRECTOR OF IT FOR THE NAVAJO NATION, ON THE TRIBAL NATION'S DEPLOYMENT OF AN INTEGRATED NETWORK



Laureate medals await their recipients at the 2007 COMPUTERWORLD HONORS PROGRAM awards ceremony.

PHOTOGRAPHY BY ASA MATHAT

ects that met 10 criteria.

For many of the attendees at the ceremony — whether they received Achievement Awards or not — the real rewards for their work came well before the gala event. That was the case for Norman Henderson, president of The IT Department Inc., an Ottawa-based IT services firm that developed a VoIP system for a medical center in Angola.

The IT Department was a finalist in the health care category, in which top honors went to the Danish National e-Health Portal, a unified Web portal for accessing health care services in Denmark. Henderson said that in Angola, his company came to the IT aid of Dr. Steven Foster, a surgeon from Canada who has worked in the African country for nearly 30 years — most of them during a devastating, decades-long civil war that didn't formally end until 2002.

The project, which was completed last year, resulted in the installation of a system that supports voice communications among the different buildings at Foster's Evangelical Medical Center in Lubango and between the center and the outside world.

Henderson and his firm's 18 employees sought equipment donations and volunteered their own time and effort to build the system, which is based on Polycom Inc.'s VoIP phones. He said the technology allows medical consultations to be conducted with input from doctors around the world.

It was a particularly rewarding project for his staff, according to Henderson. "They loved it," he said. "I've never seen the team so engaged on anything before in my life."

Information Access

Improved access to information has made a big difference at the Defense Acquisition University, a six-campus school based at Fort Belvoir, Va. Each year, the DAU graduates more than 110,000 students, including enlisted personnel and civilians, who go on to support the U.S. Department of Defense's logistics efforts.

Previously, the university had about 50 disconnected databases containing a mix of student, employee and financial data. But through a data mart project, it has created an enterprisewide data integration architecture — an initiative that earned the school the Achievement Award in the education category.

Frank Anderson, the DAU's president, said the data mart project has enabled the university to boost the productivity of its faculty and staff members by giving them the ability to access information when they need it.

"We're trying to connect data so people can get to the relevant information that they need to excel at their jobs," Anderson said.

Varian Medical Systems Inc., a maker of medical equipment in Palo Alto, Calif., received the Achievement Award in the manufacturing category for developing software that improved the delivery and precision of a new form of treatment for cancer patients, called intensity-modulated radiation therapy, or IMRT. That initiative has done more than improve operational efficiencies; it's helping to extend lives, according to Varian officials.

For certain types of tumors, such as those afflicting the prostate, head and neck, the upgraded treatments made possible by the IMRT technology have improved cure rates from 50% to 90%, said Jefferson Amacker, Varian's director of treatment planning systems.

"We look at the cure rates, and they are going up dramatically as a result of what we're doing," Amacker said. "And they are going to keep going up." To help ensure that, he added, the company is now working on "image guidance" technology in an effort to integrate all of the available imaging data about patients into the radiation therapy process. ▸

Blogs Subject to Selective Service for Digital Library

WASHINGTON

BLOGS ARE being started and abandoned at volcanic rates. Nonetheless, bloggers are creating a massive chronicle of daily life, filled with stories and, of course, rants.

It's a potentially important record of our time for future generations – one that the Library of Congress is interested in preserving. But as with other forms of digital data, the Washington-based library can't hope – and, really, doesn't want – to save all of the content being published in blogs, according to Laura Campbell, associate librarian for strategic initiatives.

Campbell, who received the 2007 EMC Information Leadership Award at last week's Computerworld Honors Program ceremony, is also the director of the National Digital Library Program. Through that and other programs, the Library of Congress is working to collect and preserve so-called born-digital data that originates on the Web and to digitize other information for online access, particularly in educational settings.

The library currently is managing about 295TB of digital data, not all of it taken off of the Internet. Campbell, who is in charge of developing strategies for preserving the electronic data, said the library and its partners, including 12 other national libraries, are selective about what they choose to capture and store. "I don't think you would want to save most of what's produced," she said.

"We're learning by doing," says the Library of Congress' CAMPBELL.

Personal blogs are part of the digital data mix in the library's collection. Campbell described their inclusion as a continuation of earlier data-collection efforts predating the Internet era. "We have the story of the common person at any time in history," she said, adding that the library is also collecting podcasts and information posted on social networking Web sites.

But there are limits to how much online data can be archived. "We are doing a sampling and go get blogs on certain subject areas that we have chosen and selected," Campbell said. "It won't be everything by any stretch."

Campbell said the library has worked with its partners to develop software tools that can help automate the process of collecting material from the Internet.

But as the collections work proceeds, improvements in the process are ongoing as well. "We're learning by doing," said Campbell, who described the current approach used by library workers as an iterative process of continuing assessments and adjustments.

– PATRICK THIBODEAU

AT DEADLINE

Microsoft to Issue Four Critical Patches

Microsoft Corp. tomorrow plans to issue six security patches, including four designed to fix critical flaws in Windows or integrated applications such as Internet Explorer, Outlook Express and Windows Mail. Less-critical updates will be released for Windows Vista and Microsoft's Visio software as part of the company's monthly release of security fixes.

Qualcomm Hit With Ban on U.S. Imports

The U.S. International Trade Commission barred imports of future mobile phones and handheld devices that contain certain Qualcomm Inc. chips. The ruling follows the ITC's finding late last year that Qualcomm had infringed on a power management patent held by Broadcom Corp. San Diego-based Qualcomm said that it will ask President Bush to overturn the import ban.

Indian Firm to Pay H-1B Back Wages

Patni Computer Systems Ltd. will pay $2.4 million in back wages to 607 H-1B workers under an agreement with the U.S. Department of Labor. The agency said the Mumbai, India-based IT services firm failed to pay prevailing wages to the workers between January 2004 and December 2005 as required by the visa program. Patni blamed the problem on "an accounting error that has since been rectified."

Short Takes

NORTHWESTERN UNIVERSITY said a breach of one of its systems may have exposed the Social Security numbers and other personal data of about 4,000 people. The security breach, discovered on June 1, was the second reported by the school within the past month. . . . MICROSOFT has acquired Stratature Inc., an Alpharetta, Ga.-based developer of software used to manage central repositories of reference data, for an undisclosed price.

Retailers Fuming Over Card Data Security Rules

Claim PCI standard shifts burden to them, could alienate customers

BY MARC L. SONGINI
BOSTON

SEVERAL RETAILERS last week bristled at having to comply with the Payment Card Industry (PCI) Data Security Standard, complaining that they carry an unfair burden in securing credit card data.

In interviews and speeches at the annual ERIexchange conference here, retail executives also complained that implementing the PCI standard is costly and could alienate customers.

The companies face heavy fines and increased transaction rates if they fail to comply with the PCI standard.

Steve Methvin, director of store systems at Bi-Lo LLC, a Greenville, S.C.-based chain of about 230 grocery stores, called on the credit card companies to do more to make cards secure, such as adding a personal identification number. He claimed that the credit card firms have declined to take such steps in order to avoid complaints from customers.

"The responsibility for a safe environment is not mutual," said Methvin, who spoke on a panel at the show. "It seems like we're being forced to provide an easy experience for Visa and MasterCard at our own expense. It's frustrating."

Retailers are investing money in areas that customers don't care about, added Methvin, who noted that Bi-Lo has so far met all the deadlines for compliance with the rules.

Five Set the Standard

The PCI standard was created by Visa International, MasterCard Worldwide, American Express Co., Discover Financial Services LLC and Tokyo-based JCB Co. to protect credit and debit card data before, during and after transactions.

Ongoing development of the standard is now managed by the PCI Security Standards Council, which the credit card companies set up in September.

The standard specifies a dozen security controls, including encryption, transaction logging and monitoring, along with authentication and access controls. It went into effect in June 2005.

Robert Fort, director of IT at Virgin Entertainment Group Inc. in Los Angeles, said that while the controls are sound, the credit card companies should have worked more closely with retailers to implement them. "Much of the PCI standard [includes] good, solid network and security policies," but "some of it is over the top" and can be confusing, he said.

Fort also contended that meeting the requirements doesn't boost a retailer's bottom line. "There's no direct return on investment," he said. "It will not help us sell CDs."

The cost of compliance will vary depending on a retailer's particular network, its security procedures and its IT infrastructure, Fort said.

Glenn Kriczky, vice president of information systems at Associated Wholesalers Inc., a Robesonia, Pa.-based food cooperative that provides IT services to independent retailers, said that convincing store owners of the benefits of the PCI rules can be difficult.

"It's the customer we have to be concerned about," Kriczky said. He added that from the perspective of store owners, data security is "only important when something happens."

Bob Russo, general manager of the PCI Security Standards Council, said the standard combines best practices from each of the credit card companies. "It tells [retailers] exactly what they need to do to be secure," he said.

> **"The responsibility for a safe environment is not mutual. It seems like we're being forced to provide an easy experience for Visa and MasterCard at our own expense. It's frustrating."**
>
> **STEVE METHVIN,** DIRECTOR OF STORE SYSTEMS, BI-LO LLC

Russo also noted that just last month, 14 large organizations, including retailers such as Wal-Mart Stores Inc. and Tesco Stores Ltd., were elected to be the first members of an advisory board to the council.

The board will collect industrywide feedback on the data security standard and suggest changes, officials said. ▸

Credit Union Bills TJX $590k for Breach Costs

A CREDIT UNION has sent The TJX Companies Inc. an invoice for $590,000 to cover the monetary costs and reputational damage that the financial institution says it incurred as a result of the data breach disclosed by the retailer in January.

HarborOne Credit Union in Brockton, Mass., sent the bill to TJX on April 30. Thus far, the retailer hasn't responded, said James Blake, president and CEO of the 100,000-member credit union.

Blake said that because of the breach at TJX, HarborOne had to block and reissue about 9,000 debit cards at a cost of around $90,000. The remaining $500,000 on the bill is what he thinks the breach has cost the credit union in terms of damage to its reputation.

"We had to notify customers of the fact that their account was breached," Blake said. "There were some questions on their part [about] whether or not we were responsible [for the breach], when in fact it was TJX's responsibility."

Instead of filing a lawsuit against TJX, HarborOne decided to give the retailer a chance to do the "morally" right thing, Blake said. "Whether they will is another issue," he added. "They have run from the problem from the very beginning."

HarborOne has had to reissue debit cards to customers on more than 30 occasions over the past 12 months in response to data breaches at various retailers, Blake said. "You can understand why we are a little upset about this," he said.

A spokeswoman for Framingham, Mass.-based TJX didn't respond to a request for comment.

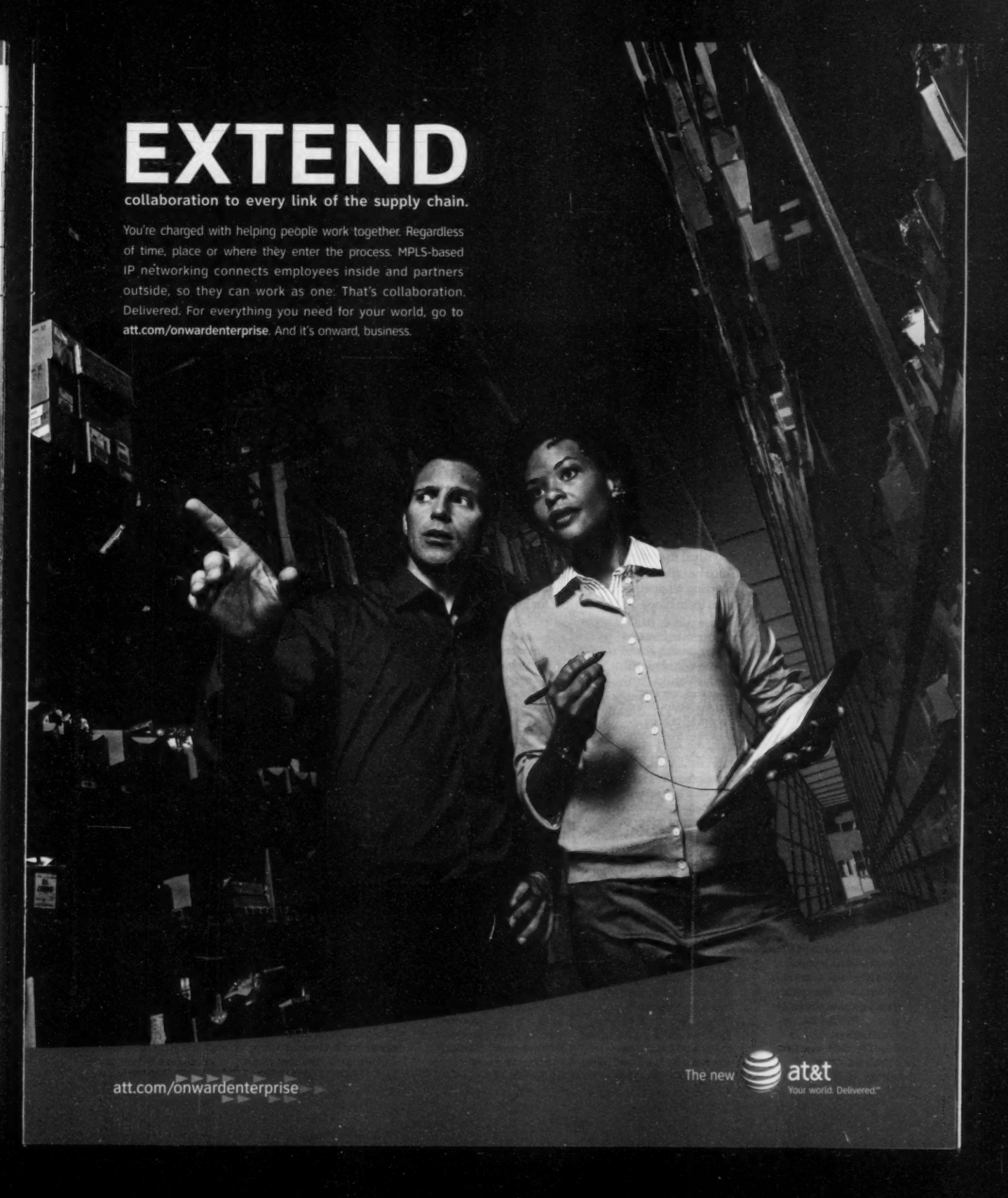
HarborOne's action coincides with growing pressure from credit union associations in various states for laws that would require retailers to better secure their systems and take financial responsibility for any data compromises. A bill incorporating elements of the PCI security standard was signed into law in Minnesota last month after being backed by the Minnesota Credit Union Network. And the California Credit Union League is now pushing a similar bill in that state.

Blake, who is chairman of the Massachusetts Credit Union League, welcomed those measures but said such legislation is needed at the federal level, not just at the state level.

At a congressional hearing in Washington last week, the head of the National Association of Federal Credit Unions called for a federal law that would hold retailers accountable for the costs of a breach.

But an official from the National Retail Federation said lawmakers shouldn't impose the same security requirements on retailers as they do on financial institutions, because the latter companies collect more-sensitive data from their customers.

– JAIKUMAR VIJAYAN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BRIEFS

Ohio U. Creates IT Advisory Council

Ohio University has set up an IT advisory council as part of its efforts to improve data security following a series of high-profile system intrusions. The council is made up of faculty members, staffers, students and university officials, plus IT workers. Its duties include reviewing and prioritizing proposals for new IT services and overseeing a yearly evaluation of the central IT department's effectiveness.

IBM to Buy Security Auditing Tool Maker

IBM has agreed to purchase Watchfire Corp., a developer of auditing tools. Terms of the deal, set to close in the third quarter, weren't disclosed. Watchfire sells software that can identify vulnerabilities in Web applications and audit sites for compliance with regulations on corporate governance, data privacy or accessibility. The company will become part of IBM's Rational Software business unit.

Equity Firm Acquires 25% Stake in Palm

Private equity firm Elevation Partners plans to buy a 25% stake in Palm Inc. for $325 million as part of a recapitalization plan initiated by the struggling mobile device maker. The deal is expected to close in the third quarter. At that time, Palm Chairman Eric Benhamou and board member D. Scott Mercer will resign from their posts. Former Apple Inc. executive Jon Rubinstein will become chairman.

Short Takes

SUN MICROSYSTEMS INC. introduced a line of blade servers that can run on multiple processors, including Intel Corp.'s Xeon chip – Sun's first use of Xeon under an alliance it signed with Intel in January. . . . **GOOGLE INC.** has acquired PeakStream Inc., a Redwood City, Calif.-based vendor of tools that can be used to develop software for multicore and parallel processors.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Mobile Tools Migrate From . . .

. . . kids to mainstream business operations. IT has always had to contend with consumer gadgets sneaking into the office. But mobile devices and services are blurring all distinctions between what is serious business technology and what's just for kids.

Raketu's PARKER has B2B services in his sights.

For example: Dan Gilmartin has his Buddy Beacon. Stéphane Marceau thinks you'll like his VoxGirl. And Greg Parker wants you to RakOut. What they're all talking about are free or dirt-cheap communication services. And the three executives say that what's popular now with the younger set is destined for old fogeys in business.

Parker, CEO of New York-based Raketu Communications Inc., says RakOut (pronounced "rock out") lets Raketu's (that one is "rock-uh-too") community members dial anyone in the world from their mobile devices and chat for free or next to nothing. On Wednesday, Raketu will launch its RakWeb service, which will let community members set up calls on the Raketu Web site between a land line and any other phone in the world at extremely low rates. By Q4, Parker says, his consumer-focused firm will be targeting companies with business-to-business mobile communications services. Mobivox Corp. in Montreal offers similar low-cost communication services, but you don't have to punch in all those digits, says Marceau, the company's CEO. Instead, Mobivox users can flirt with the virtual VoxGirl, a voice-recognition speech assistant that will set up calls for them. Later this month, users who have uploaded their Outlook contact lists to their Mobivox accounts will be able to simply say a person's name for VoxGirl to make the call. Over at uLocate Communications Inc. in Framingham, Mass., where Gilmartin is vice president of products and marketing, the company's Where software runs widgets on cell phones that can do everything from finding a buddy's location (the aforementioned Buddy Beacon) to letting you become a nanoblogger (with a widget called Twitter). Gilmartin says Where's APIs will let companies use the online service to build low-cost fleet-tracking services.

SaaS + SOA = . . .

. . . fewer jobs. So argues Jim Howard, CEO of CrownPeak Technology Inc., a content-management service in Los Angeles. He says that companies once needed hordes of programmers who could work with vendor APIs to integrate legacy systems and data with new software. But with software as a service (SaaS) based on service-oriented architecture rapidly gaining popularity, those coders are no longer needed. "Now it's all click and point and — bam! — the data is flowing back and forth," Howard says. That may sound bad, but he suggests it'll be a boon to IT because CIOs will be able to "get further down their work wish list faster and bring more value to the business." In early Q3, CrownPeak will add a personalization server to its SaaS options that provides role-based access control to Web-based services and information. Pricing has not yet been set.

HOWARD: SOA and SaaS will diminish the need for programmers.

But if you must write code . . .

. . . get on the Rails road. Programming languages are always getting eased out by newcomers. Cobol edged out Fortran. C clobbered Cobol. Java jousted with C++. Today, Ruby on Rails is routing PHP, or so its proponents claim. (For a humorous video on the matchup, check out *www.railsenvy.com*.) Olivier Thierry, vice president of marketing at FiveRuns Corp. in Austin, says the advantages of Ruby on Rails over other Web development tools are too obvious to ignore. He contends that Rails developers are 10 times more productive and that unlike older languages, such as PHP and Perl, it's optimized for building wildly popular AJAX features. FiveRuns wants to capitalize on the language's growth by being your first choice for Rails developer tools. Its Manage product can help you determine where your Rails application bottlenecks reside. And later this summer, the company will ship Install, a preconfigured and tested stack of software on which you can run your Rails applications. Subscription pricing for the FiveRuns management tools starts at $40 per month.

30+ Books about Ruby on Rails on Amazon.com.

Get a better sense . . .

. . . of what your developers do. 6th Sense Analytics Inc. in Morrisville, N.C., today will update its SaaS offering for keeping tabs on programmer productivity. Jake Sorofman, vice president of marketing, says 6th Sense puts a "lightweight sensor" into a developer's IDE that tracks work such as editing or debugging. This helps IT managers plan projects, deploy people more efficiently and assess completion dates more accurately. Today's release adds integration with four popular bug-tracking and ticketing systems: Jira, Bugzilla, Trac and Microsoft Team Foundation Server. It also now supports the Microsoft Office suite, which Sorofman says is the most common requirements-definition tool. Pricing starts at $960 per user per year. ▸

Get a good glimpse into developer activity, says SOROFMAN.

>> SESSION 2

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Continued from page 1

ODF

chairs the committee.

Only Minnesota has approved a bill on open document formats thus far this year, and that was a Pyrrhic victory for ODF advocates. Like the bill in New York, the measure signed into law in Minnesota simply calls for the state's IT department to study the issue. Initially, it would have required state agencies to begin using an open, XML-based document format by July 2008.

Don Betzold, a Democratic state senator who was the original sponsor of the open formats proposal, said he and other Minnesota legislators felt overwhelmed by the technical jargon presented by each side. "I wouldn't know an open document format if it bit me on the butt," Betzold said. "We're public policy experts. [Deciding technical standards] is not our job."

Microsoft didn't respond to requests for comment about the legislative results in the various states. But one of the company's close allies said the outcomes revealed the unpopularity of technical mandates.

"The media stories [about the bills] made it sound like there was some sort of revolution on the ODF front," said Melanie Wyne, executive director of the Initiative for Software Choice in Washington. "But in each case, they were killed, stalled indefinitely or, in the case of Minnesota, turned from an outright mandate into a study bill."

Wyne's group is the lobbying arm of the Computing Technology Industry Association, which worked closely with Microsoft to fight the bill.

Despite the string of defeats, Marino Marcich, executive director of the Washington-based OpenDocument Format Alliance, said the fight has just begun. "In three years, we expect open document formats to be a requirement by most states, whether that arrives via legislation or by executive policy decision," Marcich said.

With the private sector showing little interest in adopting ODF, the format's proponents have set their sights on government users. And the national governments in countries such as Norway, Belgium, Denmark and France are testing or have approved moves to open file formats.

> **"The media stories [about the bills] made it sound like there was some sort of revolution on the ODF front. But in each case, they were killed, stalled indefinitely or . . . turned . . . into a study bill."**
>
> **MELANIE WYNE,** EXECUTIVE DIRECTOR, INITIATIVE FOR SOFTWARE CHOICE

> **"In three years, we expect open document formats to be a requirement by most states, whether that arrives via legislation or by executive policy decision.**
>
> **MARINO MARCICH,** EXECUTIVE DIRECTOR, OPENDOCUMENT FORMAT ALLIANCE

But in the U.S., the only state that currently has a policy requiring the use of open formats is Massachusetts. Even there, technical and political issues have limited the implementation of the policy (see story below).

Microsoft has fought the various state bills even though it is seeking to have Office Open XML — the file format used in Office 2007 — approved as a standard by the Geneva-based ISO standards body. ODF received the ISO's stamp of approval last year.

Lobbyist Influence

Betzold said that Microsoft's hardball lobbying tactics played a role in the outcome of the debate over the open formats bill in Minnesota. But he added that neither side was innocent. "IBM had their own interest, and Microsoft had their own interest," he noted.

Texas State Rep. Marc Veasey said he became interested in the open formats issue after a meeting with former political colleagues who now work as lobbyists for IBM.

Veasey insisted, though, that the deciding factor in persuading him to propose a bill calling for the use of open formats was a conversation with officials at the Texas Department of Information Resources. He said the DIR officials told him that "while there was nothing to prevent us from immediately going to open document formats, they would prefer, for a variety of reasons, for the legislature to say, 'We're going to this format.' "

But Jonathan Mathers, chief clerk for the Committee on Government Reform in the Texas House of Representatives, said committee members heard something completely different from the DIR.

"The committee wanted a flat-out answer from the DIR," said Mathers, who is in charge of researching bills for the panel. "Was [moving to open document formats] something we should be doing right now? And did they need the backing of the committee to do it? The answer in both cases was no."

The DIR didn't respond by press time to questions about its position on the open formats bill. But Veasey blamed other factors, including Microsoft's lobbying tactics, for the reform committee's decision to quash the proposal.

Microsoft's opposition was unnecessary, Veasey said, adding that the bill's language put Open XML on a level playing field with ODF. He plans to continue pushing for open document formats when the Texas legislature meets for its next biennial session in 2009.

California lawmaker Leno vowed in an e-mail last week that he would again try to pass his open formats bill when the state legislature begins the second half of its current two-year session in January.

Oregon's attempt to push state agencies toward open document formats also died in committee. "There was heavy opposition from a certain large software company in Redmond, Wash.," said a spokesman for Rep. Peter Buckley.

The spokesman said that Buckley, who sponsored the bill, plans to reintroduce the measure in the next legislative session. But as in Texas, the earliest that could happen is January 2009.

State's Move to Open Formats Still Not a Mass Migration

ONLY A TINY FRACTION of the PCs at Massachusetts government agencies are able to use the Open Document Format (ODF) for Office Applications, despite an initial deadline of this month for making sure that all state agencies could handle the file format.

Bethann Pepoli, acting state CIO and director of the Massachusetts Information Technology Division (ITD), said via e-mail last week that only about 250 of the 50,000 PCs at the state's agencies have been outfitted with a Sun Microsystems software plug-in enabling them to create, read and save Microsoft Office files in ODF.

Last August, then-CIO Louis Gutierrez sent a letter to advocates for people with disabilities in which he promised that some early-adopter agencies would begin using Office plug-ins with support for ODF by the start of this year. He added that the state planned by this month to migrate its other executive agencies "to compliance with the standard" in a phased rollout.

Pepoli said that the state is behind its original schedule, but she noted that potential plug-in suppliers weren't able to deliver working versions of their software by last November. In his letter, Gutierrez wrote that the rollout plan depended on getting usable plug-ins by that deadline.

According to Pepoli, the ITD did deploy an Office-to-ODF converter for Word text files at some agencies in January. After IT staffers "worked through the issues" with Sun, the ITD signed a license agreement for the free plug-in early last month, she said.

The IT unit is still installing the plug-in at state agencies. But Pepoli said it now has no schedule for completing the rollout, apart from "wanting to get it done as soon as possible."

One thing that might help: The ITD has created a small .msi file for installing the Sun plug-in on Windows systems and can transmit the file to PCs overnight and set it to automatically install itself when they are turned on, Pepoli said.

The state's open formats policy was crafted by ITD officials in late 2005, outside of the legislative process. But Gutierrez announced the plug-in strategy last year so that agencies could continue using Office, after accessibility advocates complained that ODF-based applications don't work as well as Microsoft's products do with screen readers and other tools used by the blind. Microsoft itself lobbied heavily against the original policy after it was announced.

The slower-than-planned rollout of the plug-ins in Massachusetts appears to have influenced the legislators in Texas who recently quashed an open document formats bill.

At a hearing held by the Committee on Government Reform in the Texas House of Representatives, Melanie Wyne, executive director of the Initiative for Software Choice, testified that only a handful of government PCs in Massachusetts had been converted to ODF.

Jonathan Mathers, the committee's chief clerk, said that IBM's lobbyists declined to dispute Wyne's claims – despite having previously given "gleaming" reports on the ODF rollout in Massachusetts. "That's when I really started to question the whole bill," Mathers said.

– ERIC LAI

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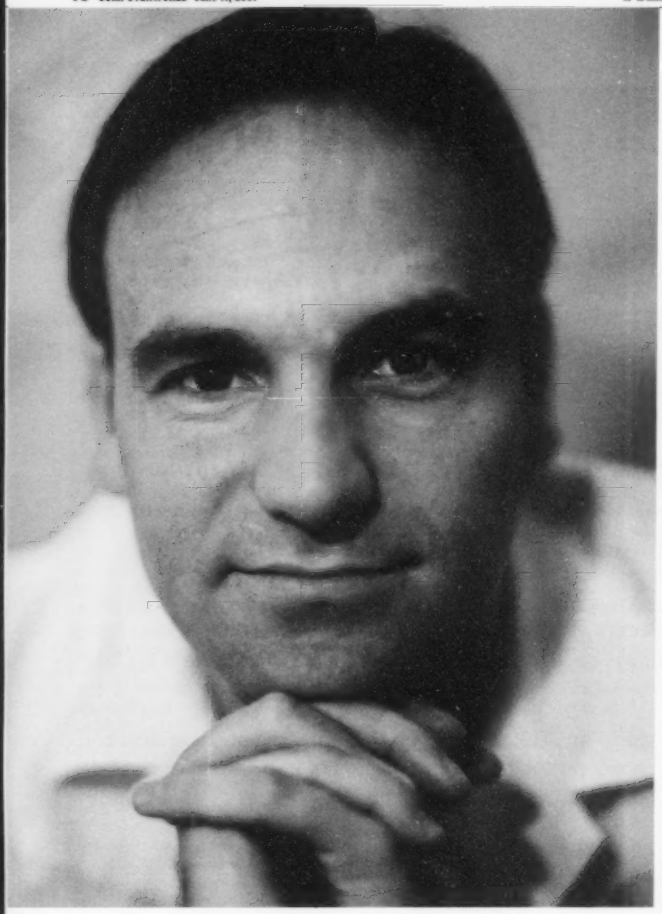


Mark Shuttleworth

The **founder of Ubuntu Linux** talks about **free software** for the masses, **cultural tidal waves** and **building rockets** in his parents' kitchen.

THE GRILL

Mark Shuttleworth made news in 2002 when he fulfilled a lifelong ambition and became the first South African to travel into space, paying $20 million to be a civilian cosmonaut on an eight-day flight aboard a Russian Soyuz spacecraft. In 2004, he founded Ubuntu Linux to bring the operating system to people around the world. He is also the founder of HBD Venture Capital and the nonprofit Shuttleworth Foundation.

You have pumped more than $10 million of your own money into the continuing development of Ubuntu Linux, and you have been on a personal campaign to bring a free, easy-to-use and reliable Linux to the masses around the world. Why? In college, I was struggling to get my own personal computer hooked up to the university network. Then someone gave me a stack of Slackware Linux discs, and [I] found myself just enthralled by the breadth and depth of the tools that were available from Linux, even in those very early days. It's like going from living in the desert to walking into an all-you-can-eat buffet. I went on to turn that interest in the Internet into a small business called Thawte [in 1995], which sold digital certificates that I created, initially at least, with cryptographic software that was available under an open-source license.

How did you think of getting into such a business back in 1995, just as the Internet was becoming a household word? I was poor. I was desperate. I wanted to be on this bandwagon of this Internet thing, and I wanted to find a business that wouldn't require large amounts of bandwidth or large amounts of capital.

The key was Linux. It was Linux that let me connect to the Net so I could start soaking up this knowledge. It was Linux that let me put servers down in a company with an employee count of one, and to have servers in three countries and administer them all remotely over slow dial-up lines. You could only do that with Linux.

I sold that business in 1999, right at the top of the Internet bubble. That then gave me the opportunity to sit back and ask myself, What are the things in life that I would like to be a part of? You know, life is short.

One thing was to explore space and be a part of that adventure. I went and I did that. And the other thought was to be a part of this experience of free software, which had been beneficial to me — bringing that to a much wider audience. And that's the genesis of Ubuntu.

Ubuntu Linux has come a long way in just three years. How far are you from the dream of Linux for the masses? Well, we certainly have been part of the process of making Linux more widely accepted and interesting and useful. Part of that has been fortunate timing. The Linux community itself around 2004 decided it was an interesting problem. The Linux kernel guys were feeling like they had proven that they could make the kernel stable and reliable and robust, and the next challenge was the desktop. So we've benefitted by entering the scene right at the same time as everybody else was getting interested in that.

Here in the U.S., Ubuntu has been getting attention for its desktop operating system. What's the strategy for Ubuntu in the corporate marketplace with its server OS version? Of course, it will take time to build up a complete portfolio of certification. But many organizations have taken the first step, which is deploying Ubuntu on a server somewhere — even if that's just an internal affair, such as a high-performance computing testbed and evaluation pool, places where they feel they can take some risks or places where they don't depend so much on third-party certifications. So, for instance, people who are deploying things like LAMP stacks love Ubuntu because it has everything they need. We've seen very rapid adoption there. It will take time, obviously, to have people deploying it in the heart of their networks and underneath their database servers, because we have to build the relationships with those [software] vendors. That's not quite the work of a lifetime, but it's certainly a multiyear exercise.

What kind of response have you been getting from traditional IT vendors? It surprised people. You know, any surprise is a bad surprise for people who are in as long

Continued on page 18

Dossier

Name: Mark R. Shuttleworth

Title: Founder, Ubuntu Linux

Home base: London

Most interesting thing people don't know about him: "As a boy, spaceflight has always been intrinsically fascinating to me. Even when it involved smoking out the kitchen with badly made, gunpowder-fueled homemade rocket motors. Hours and hours of work, but all I ever made was a lot of smoke."

In high school: "I was a bit of an overachiever, actually. I did a lot of cultural stuff and did embarrassingly well in exams and things."

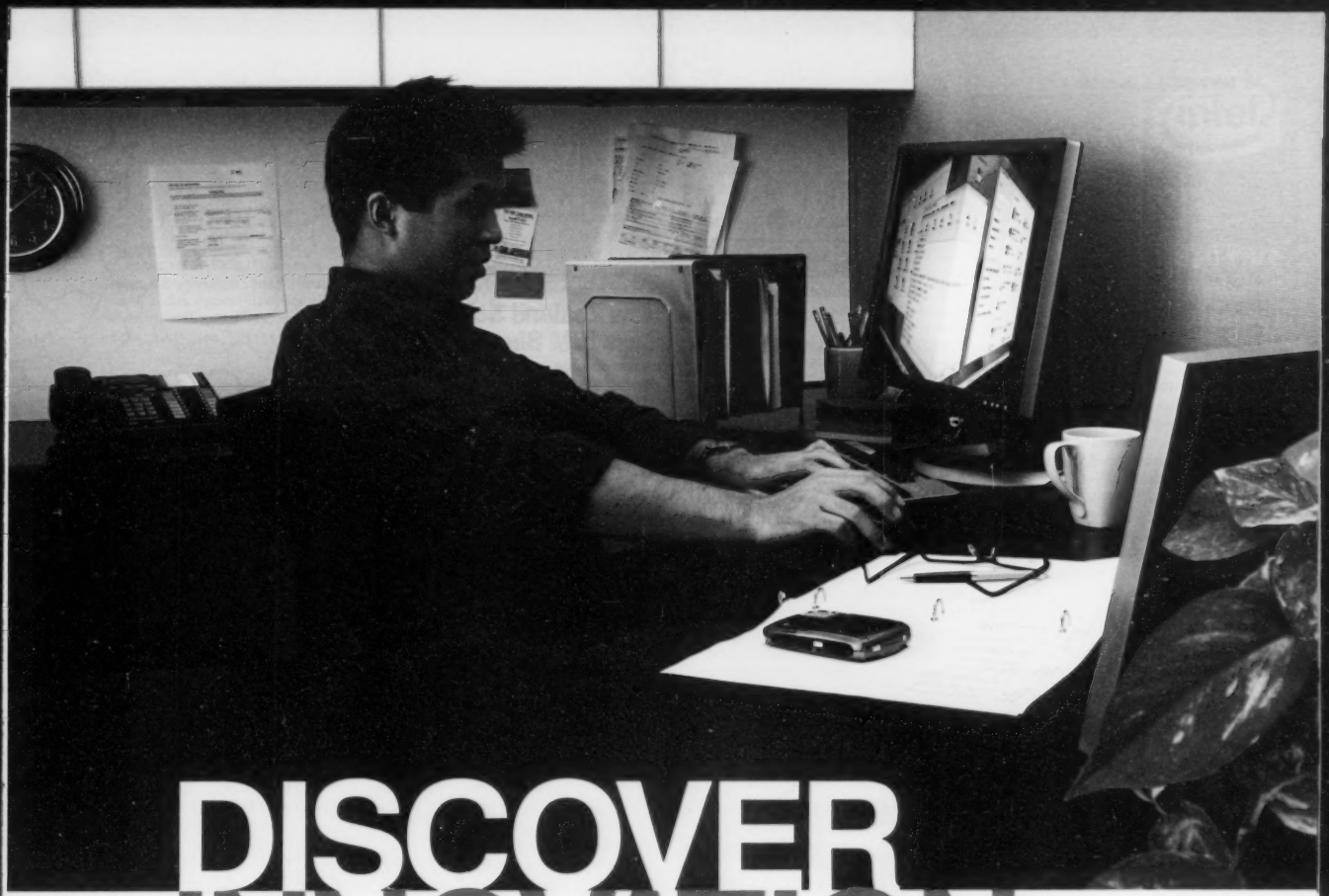
Early ambition: "I signed up at the University of Cape Town for a bachelor's of science degree. Then, when I arrived at school, I felt horrified to see that all of the attractive girls were going over to the business school, so I switched."

Wheels: "I don't have a car. I take the tube, or I take a cab."

Last book you've read? *The Bartimaeus Trilogy*, a fantasy series by Jonathan Stroud

Favorite movie: *The Fifth Element*

Favorite place: "Cape Town, South Africa, my hometown and where I want to live again someday."



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GLOBAL DISPATCHES An International IT News Digest

Hardware Woes Crash Bank IT Systems

EDINBURGH

THE ROYAL BANK of Scotland Group PLC blamed a computer hardware problem for shutting down its online and telephone banking operations as well as cash machines throughout the U.K. earlier this month.

The financial services firm, whose holdings include NatWest Bank, said it has more than 22 million customers in the U.K.

The Edinburgh-based company confirmed that a hardware problem caused the outage, but it declined to provide details of the glitch.

"It is not appropriate to go into further details, due to security considerations," a bank spokesman said. He did note, however, that an internal computer breakdown, not an external attack by hackers, caused the problem.

The bank's systems crashed late on June 1, and service to cash machines was restored the next day, the spokesman said.

He said that the bank is "extremely sorry for the inconvenience caused to our customers due to the technical problems we experienced with our systems over the weekend."

■ TASH SHIFRIN, COMPUTERWORLD U.K.

GLOBAL FACT

€2.3B

Amount of venture capital invested in start-up IT companies in Europe in 2006.

SOURCE: LIBRARY HOUSE, CAMBRIDGE, ENGLAND

Staffing Firm Launches ERP Implementation

BOX HILL, AUSTRALIA

THE SKILLED GROUP, a staffing services provider here, is in the process of implementing a multimillion-dollar ERP system from Bristol, England-based Agresso Ltd.

London-based services firm Logica-CMG PLC will build, test and integrate Agresso Business World ERP software at the Skilled Group, executives said. The Australian firm hopes that the software will enable it to streamline and automate its billing and payroll processes, they said.

Skilled Group CIO Trevor Punchard said the company was looking for an ERP package to create a corporate standard after acquiring seven companies over the past eight months.

The company selected the Agresso tool set after a comprehensive assessment of best-of-breed and integrated products from major global ERP vendors, Punchard said.

■ SANDRA ROSSI, COMPUTERWORLD AUSTRALIA

New Zealand School Buys IBM Blue Gene

CHRISTCHURCH, NEW ZEALAND

THE UNIVERSITY of Canterbury has agreed to become the first research institution in the southern hemisphere to purchase an IBM Blue Gene supercomputer.

The acquisition of the Blue Gene/L supercomputer was approved by the university's council last month. The system will be installed in July.

The council did not disclose the cost of the IBM machine, which is generally priced starting at about $1 million.

"[The supercomputer] will be one of the 25 most powerful supercomputers operating in academia worldwide," said Roy Sharp, vice chancellor of the Christchurch-based university.

"Its significant computing power will be available to researchers around New Zealand and will enable research never before possible in this country," Sharp said.

■ RODNEY GEDDA, COMPUTERWORLD AUSTRALIA

Compiled by Mike Bucken.

Briefly Noted

Red Hat Inc. **has agreed to train government IT staffs in the Indian state of Kerala to develop and maintain open-source applications. The Kerala government in January announced a draft IT policy that called for the use of open-source software in e-governance projects. Red Hat will also train schoolteachers to use Linux desktop software.**

■ JOHN RIBEIRO, IDG NEWS SERVICE

Flextronics International Ltd. **in Singapore last week agreed to acquire rival Solectron Corp. to create an electronics manufacturing services powerhouse with more than $30 billion in annual revenue. The deal, valued at $3.6 billion in cash and stock, would create a company with 200,000 employees, including 4,000 design engineers. The merger is expected to close by the end of the year.**

■ GRANT GROSS, IDG NEWS SERVICE

Dell Inc. **late last month opened a 200,000-square-foot R&D facility in Bangalore, India, that can house a staff of up to 1,000. The new facility is part of Dell's plan to develop enterprise servers, storage systems and software in India.**

■ JOHN RIBEIRO, IDG NEWS SERVICE

Continued from page 16

and intense a game as those big companies have been playing in the marketplace. I think we've shaken things up a little bit in a market that was seen to be well established and predictable, so it will take time for those companies to take a view on how they feel about the changes that we're bringing about.

THE GRILL

What do you think of the Apple OS and hardware? Are they the standard of quality for open source and Ubuntu in terms of matching their ease of use and eloquence of design? In many cases, Apple has set the pace. I can think of cases where it's free software that has set the pace. The Mozilla Firefox browser is a great example of what happens when you get a small team that has good raw materials and they just relentlessly focus on making something that's a joy to use. It's a combination of simplicity and extensibility that gives you the ability to produce something that is both easy to use for a first-time user and powerful for someone who sits in front of a browser every day, all day.

What do you think is the next big thing in Linux where Ubuntu can make even more waves? We think that virtualization is one of the most exciting things happening in Linux today, and we're trying to incorporate the most exciting and mature technologies cleanly into Ubuntu.

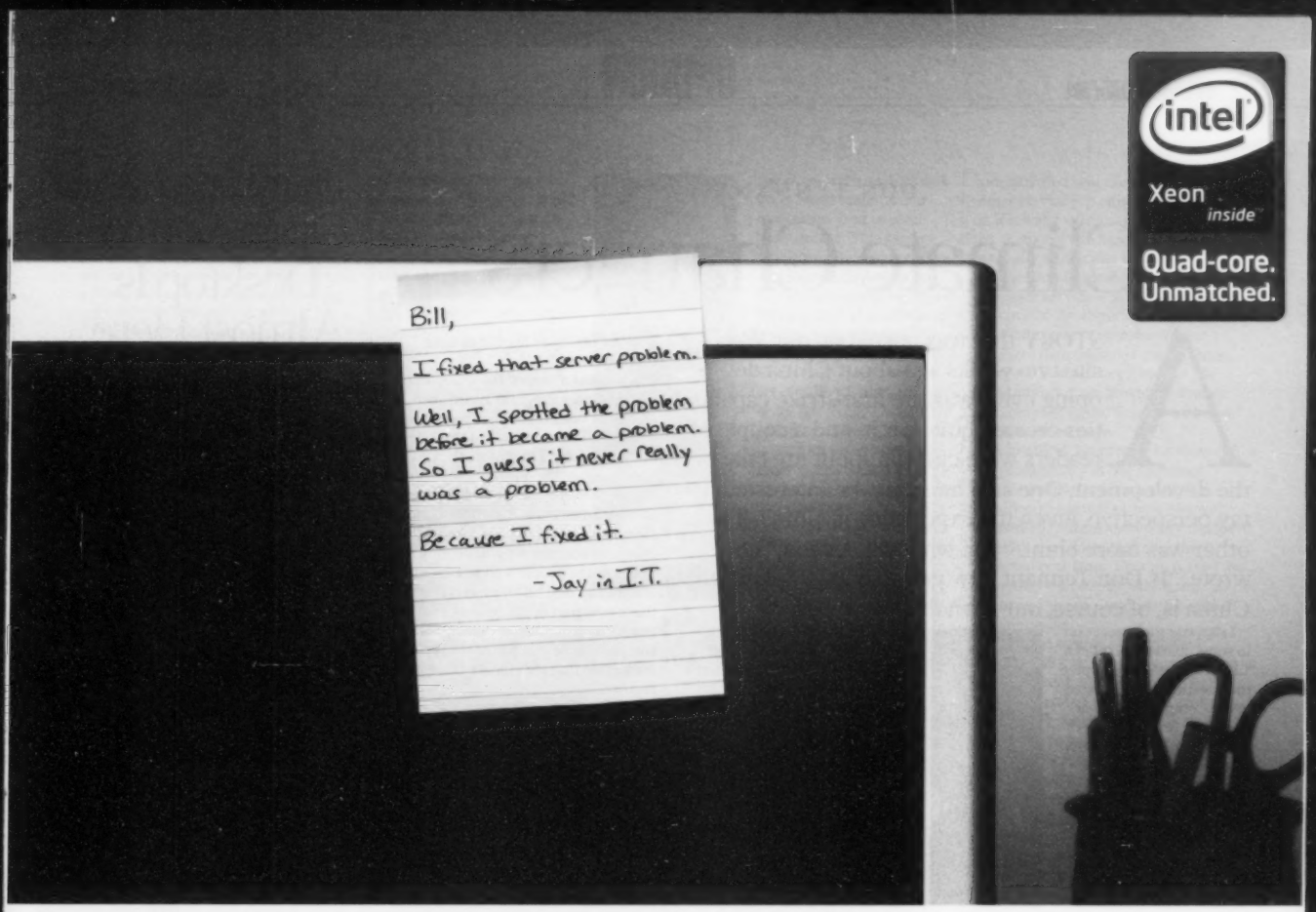
> **Free software is part of a broader phenomenon, which is a shift toward recognizing the value of shared work.**
>
> **MARK SHUTTLEWORTH,** FOUNDER, UBUNTU LINUX

What are you most passionate about in your work? Tidal waves. I'm fascinated by things that sweep through society and then change everything that they touch in different ways. The Internet itself was the first big tidal wave that I could actually witness. I guess I also saw desktop computing as a kid, but I didn't really have much of a perspective on it. But watching the Internet sweep through society, changing the way my mother worked, changing the way businesses worked, changing the way people designed products and so on, has been amazing. I wanted a project there that was right on the cutting edge of it.

Free software is part of a broader phenomenon, which is a shift toward recognizing the value of shared work. Historically, shared stuff had a very bad name. The reputation was that people always abused shared things, and in the physical world, something that is shared and abused becomes worthless. In the digital world, I think we have the inverse effect, where something that is shared can become more valuable than something that is closely held, as long as it is both shared and contributed to by everybody who is sharing in it.

That's a fascinating concept, and I think it's going to touch many industries. Software is the first. To be part of that is entirely another tidal wave.

– INTERVIEW BY TODD R. WEISS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Because I fixed it.
-Jay in I.T.

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DON TENNANT

Climate Changers

A STORY that was posted on our Web site two weeks ago about China developing cyberwarfare first-strike capabilities created quite a stir, and a couple of readers were curious about my take on the development. One said he would be interested in my perspective, given my experience in China. The other was more blunt. "Just what we needed," he wrote. "Is Don Tennant now going to tell us again that China is, of course, our friend?"

DON TENNANT is editor in chief of *Computerworld*. Contact him at don_tennant@computerworld.com.

I suppose the perception in some quarters that I'm a "China apologist" prompted the question. It was posted in the Comments section under the story, and I responded with a little levity: "I believe it was Richard Pryor who said it best. I don't remember the precise quote, but it was something like, 'We should be friends with a billion of anything.' "

But let's get serious. The story referred to a Department of Defense report warning that the People's Liberation Army "has established information warfare units to develop viruses to attack enemy computer systems and networks." Moreover, the report said that the PLA is incorporating the capability into its exercises, "primarily in first strikes."

My take? The naiveté of anyone who is surprised by this is perplexing. And the parochialism of anyone who singles out one particular country as a villain for doing it is maddening.

Consider this statement from a Gartner report dated May 14, 2007: "Based on public domain information, the following nations are believed to possess or be developing defensive or offensive cyberwarfare capabilities: Australia, Canada, China, France, Germany, India, Japan, Malaysia, Pakistan, North Korea, Russia, Singapore, South Korea, Sweden, Taiwan, the United Kingdom, the United States and other members of the North Atlantic Treaty Organization."

Should we presume that the good guys on the list are only developing defensive capabilities, and that it's just the bad guys who are going the offensive route? Don't kid yourself. There's not a country on that list that isn't convinced that the best defense is good offense.

So let's recognize the threat for what it is: just one front in a stormy international political climate that becomes even more unsettled when the cold air of mistrust meets the colder air of myopia.

The endlessly debated question has to do with the best way to approach the storm. Do we insulate ourselves from it, or do we once and for all attempt the seemingly impossible task of changing the climate? And if we opt for the latter course, to whom do we look to change it? Who among us are the climate changers?

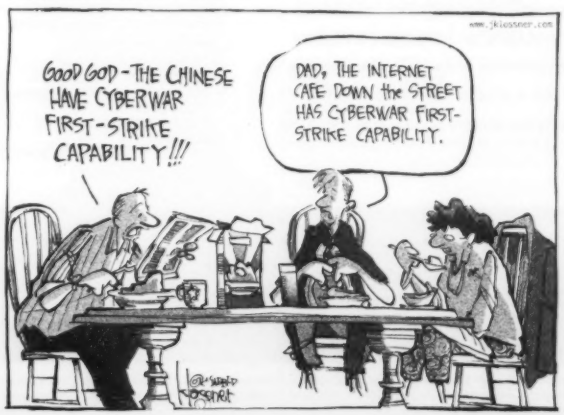
If you had attended the Computerworld Honors Program awards ceremony in Washington last week, you might well have concluded that one of them is John Thompson, the CEO of Symantec. Thompson, who was at the event to receive the 2007 Morgan Stanley Leadership Award for Global Commerce, accepted the honor with characteristic humility, deflecting the praise to the people who work for him.

But in an oral history interview that's now part of the Honors Program's international archives, Thompson provided a glimpse of the type of leadership that the climate change will require.

"We're on a course where it's inevitable that information will flow freely around the world, even in countries like China, where they would like to control where people go and what people see," he said. "Information sharing will be at the core of creating bigger, broader democracies around the world."

It's also at the core of what builds friendships between nations. Is China our friend? If it's not, we'll need as many people like John Thompson as we can get to change that.

Don Tennant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JOHN D. HALAMKA

Open-Source Desktop Is Almost Here

IS 2008 the year of the open-source desktop? Red Hat Linux is now widely deployed on the servers in my data center. Users have no idea what operating system underlies our Web applications and databases, nor do they care, as long as those tools are highly available.

But the desktop is uncharted territory. Over the past year, I've been on a quest to find an operating system that balances ease of use, stability, low cost and high functionality. My experiences were the subject of an article in *CIO* magazine that described how I tried to use my enterprise applications with Windows XP, Mac OS X, Red Hat and Fedora. Recently, I've spent months running Novell's SUSE Linux and Canonical Ltd.'s Ubuntu, and I'll report on those efforts soon.

JOHN D. HALAMKA is CIO at CareGroup Healthcare System, CIO and associate dean for educational technology at Harvard Medical School, chairman of the New England Health Electronic Data Interchange Network, CIO of the Harvard Clinical Research Institute and a practicing emergency physician. Contact him at jhalamka@caregroup.harvard.edu.

Based on these experiences, I think I can say when the open-source desktop will become a more widely deployed end-user operating system: when it becomes a product and not a project. That will require the following:

- The open-source desktop should recognize my video chip set, my wired/wireless networking hardware and all my storage devices without being custom-configured, which would require me to search the Web to learn how others have done the same thing with the same hardware. Searching the Web works, but even for a high-level engineer, a typical laptop requires a lot of trial and error.
- Wireless support should include the common security protocols: WPA, PEAP, LEAP and EAP-FAST. The wireless client should roam as I change locations, associate with the most optimal access point and work perfectly upon waking from hibernation.

■ USB thumb drives should work seamlessly without having to manually mount a volume.

■ The open-source desktop should include a browser, a robust e-mail client, an office productivity suite, a photo editing tool and a GUI tool for setting my configuration preferences.

■ It must be stable and reliable.

■ Finally, the average user should be able to use it (which rules out all command-line operations).

I've not been able to find anything that meets all of those criteria, but things are beginning to change. The newest releases of open-source operating systems and applications are almost good enough. For the first time, I can consider using them as my primary desktop tools. I've run into a few issues with my e-mail client, my SSL VPN client and wireless networking that require consultation with a high-level engineer, but day to day, my experience is positive. I believe that 2008 will be the year when the open-source desktop reaches the point where a nonengineer can install and use it effectively.

This is not about being anti-Microsoft. I oversee thousands of machines that use Microsoft software, and many users need applications that are available only for the Microsoft environment.

It's not about being anti-Apple. I respect the user experience of Mac OS X, and I wish Steve Jobs would license the operating system to other hardware manufacturers, who could then offer choices that meet other needs, such as a 2 lb. subnotebook for road warriors.

What this is about is recognizing that the open-source desktop is nearly ready for select desktop users. Dell has begun to offer open-source options for its desktops and laptops. Lenovo is certifying and supporting SUSE Linux Enterprise Desktop on the ThinkPad T60p.

Let's hope 2008 will be the year that the projects end and we can assess all the products based on their suitability for each user.

MICHAEL H. HUGOS

BPM for the Responsive Enterprise

WE LIVE in a global economy, where continuous incremental change is the name of the game. Gone are the days when companies could hope to prosper by just doing the same things and making the same products over and over. Successful products and services are quickly copied; they become commodities, and the prices companies can charge for them are continually ratcheted down.

MICHAEL H. HUGOS is a principal at the Center for Systems Innovation and a speaker. He is a member of the 2006 *Computerworld* Premier 100 IT Leaders class. His newest book is *The Greatest Innovation Since the Assembly Line: Powerful Strategies for Business Agility* (Meghan-Kiffer Press, 2007). He can be reached at **www.MichaelHugos.com**.

The best way to earn profits in this economy is for companies to differentiate themselves and their products to respond to ever-changing customer needs. Using business process management (BPM), a company can pay attention to individual customers and increase the value of even the simplest products by wrapping them in a blanket of value-added services that respond precisely to customers' needs.

Companies can use BPM technology to leverage existing systems infrastructure and become much more attentive to customer needs. I was recently the CIO of a national distribution company that sold janitorial supplies and food-service disposables (stuff like floor wax, paper cups and plastic forks). We differentiated ourselves by layering a BPM system on top of the existing EDI and Web-based systems that customers used to place their orders. This system monitored incoming orders and alerted customer service people whenever there was a potential problem or a service opportunity.

Here's how it worked. There's always a common set of things that every order has to have, such as a ship-to address, items, quantities and prices, but there is also a handful of things that are different for each customer. The BPM system allowed customer service reps to define what a good order looked like for each customer they covered. And reps had the power to change those order definitions without a programmer having to hard-code that logic into the order processing systems.

So, as different customers came on or as their requirements changed, customer service people could update their own criteria for good orders. Then the BPM system screened the orders; if orders were good, they just flowed on through. But if an order didn't meet requirements, the system trapped it, attached it to an e-mail and sent it to the rep responsible for the company that sent the order. The customer service rep either fixed the order or, if it was really strange, contacted the customer and handled the order manually all the way through.

When you think about it, that's what customer service is all about. Customers noticed the attention we gave them. They often paid a bit more for our products than what our competitors charged because they liked the personal attention we provided; it made our company easier to work with and worth more to them.

Using BPM, we greatly increased the productivity of our customer service people by automating the handling of routine orders, and we focused their time and energy on dealing with the orders that contained potential problems. This increased the value they delivered, both to the customer and to our company, by orders of magnitude.

The BPM system was installed quickly, and it delivered a great return on investment. It enabled us to stand out in a crowded market and gave our salespeople something to talk about besides price when customers asked why they should do business with us instead of with someone else.

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READERS' LETTERS

The Suck-ups Will Always Be With Us

AFTER 25 years in IT and more in business, I cannot tell you how many versions of the article "Suck-ups: Why CIOs Love Them" I have seen [Strategies & Tactics, April 23]. Do you really believe this will change anything? An article about sucking up for success and retaining your humanity would have been more useful.

J. Mueller
Chicago

A Call for Civility – And Not Just Online

IT'S ABOUT time someone put into place a set of guidelines governing civility on the Net ["Civility or Censorship? O'Reilly Proposes Blogging Code of Conduct," *Computerworld.com*, April 9]. I am sick and tired of the rudeness and verbal abuse that take place online, and I'd especially like to see racist, anti-Semitic and sexist comments banned.

It's not about censorship; it's about having good, commonsense boundaries. It's about treating other people the way you yourself would want to be treated. We need a code – badly!

Lalena Weatherman
Sunnyvale, Calif.

I AGREE WITH Don Tennant that uncivil writing exists ["Incivility Creep," Editorial, April 16], and I concur with his notion that our online and real-life worlds are one and the same. What I challenge is his perceived order of things. It is *real life* that came first, not the text. As a society, we must deal with people's intolerances and prejudices *before* they are written. Applying censorship to "byline-less" text will never address an author's distaste for this, that and the other.

Roland Ketchley
Bellingham, Wash.

Experts Capably Explain the Obvious

WHILE READING the article "AMD Set to Launch Quad-Core 'Phenom' Desktop Chip" [*Computerworld.com*, May 14], I had to wonder how long it took the analyst who was quoted to figure out that the mainstream is ready for multicore. After Intel released its multicore initiative? After AMD's announcement? This isn't exactly a difficult conclusion to make, so I hope this analyst wasn't paid much to come to that conclusion.

In the same article, AMD product manager Ian McNaughton says that it's no longer acceptable for a computer to lag and boot slowly. I don't seem to remember a time when it ever was acceptable for a computer to be unresponsive and take a long time to boot. Yeah, it's always been that way, but I never thought it was acceptable.

Oscar M. Leeper
Software engineer, Portland, Ore.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

STRATEGIES & TACTICS

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CareerWatch **PAGE 34**

Security Manager's Journal **PAGE 38**

Opinion: Bart Perkins **PAGE 40**

NO CONTACT

RFID-based contactless payment cards are fast, secure and largely unused. Smart phones may be called in to help.
By Robert L. Mitchell

CUSTOMERS WHO drive up to any of the more than 1,000 Arby's restaurants can literally wave themselves through the payment window. The fast-food chain is one of the first to have rolled out support for contactless payment cards nationwide, both inside and at the drive-through. "We built it," says CIO Don Zimmerman. "Now we'll see if they'll come."

Contactless payment systems are based on a wireless technology embedded into some credit and debit cards and even key fobs from the major card issuers. The systems use radio frequency identification (RFID) technology to complete transactions between a card and a store terminal without the user swiping the card. And since card readers follow the ISO 14443 messaging standard, any business with a compliant reader can process card transactions from any contactless card, including those from Visa U.S.A. Inc., Master-

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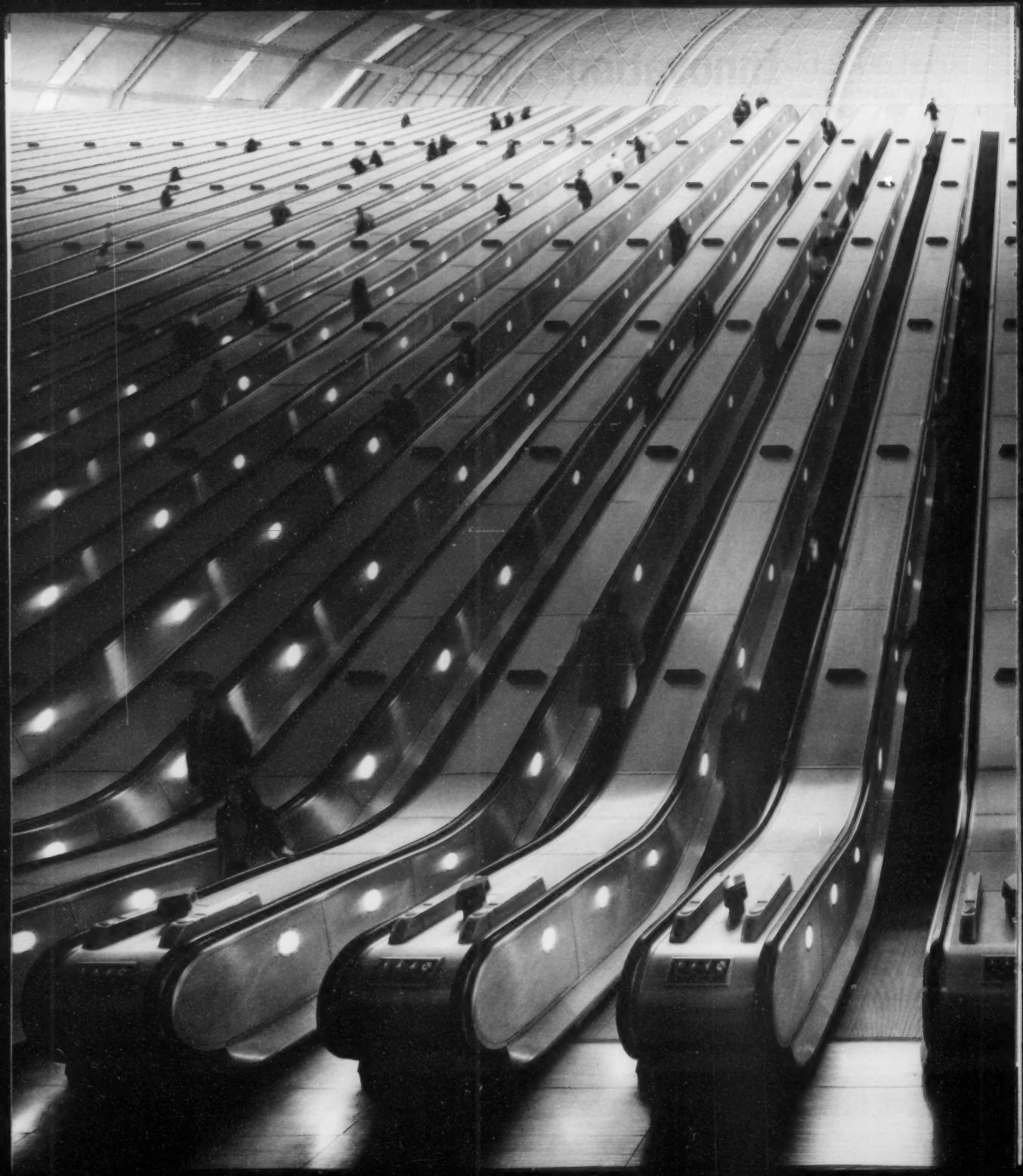

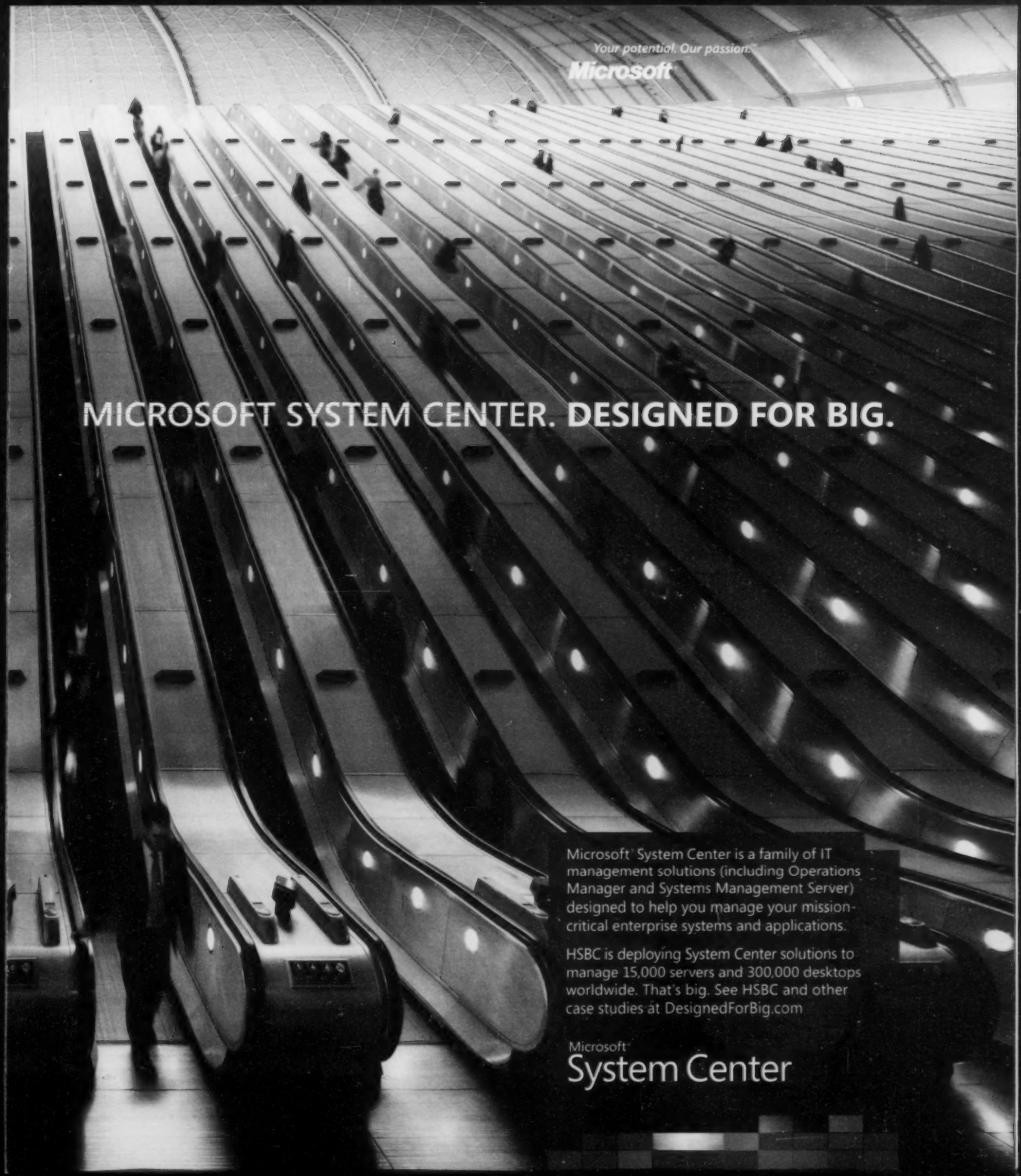
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Card International Inc. and American Express Co.

Contactless RFID technology appears to offer something for everyone. For card issuers, it adds about $1 to the cost of a card but represents the next step in the banking industry's attempt to chip away at the cash economy by expanding the use of debit and credit cards for small transactions.

> **We're deployed in all of our restaurants in the U.S.**
> **DAVID GROOMS,** VICE PRESIDENT OF IT, MCDONALD'S USA

For consumers, contactless technology offers convenience. There's no personal identification number to enter and no need to swipe a card, and transactions under $25 don't require signatures. Users simply hold the cards about an inch away from the readers to activate them.

For merchants like Arby's Restaurant Group Inc., where speed is important, card issuers promise faster transaction times. American Express claims that transactions using its ExpressPay-enabled credit cards can be completed in about one-third the time of a cash transaction and about half the time of a swipe-card transaction.

There's just one problem: Only a tiny percentage of consumers have contactless cards today, and most retailers remain on the sidelines. Less than 2% of Visa's 500 million cardholders in the U.S. currently have the technology. MasterCard has distributed 13 million PayPass cards and claims that 46,000 merchants now accept them. But the pharmacy chain CVS/Caremark Corp., which has had contactless readers in operation since 2005, says that less than 1% of its card transactions are contactless. "The adoption of the technology by consumers remains very small," says a company spokesman.

If that changes, McDonald's Corp. will be ready. The fast-food giant has been prepared for contactless payment for two years. "We're deployed in all of our restaurants in the U.S.," says David Grooms, vice president of IT at McDonald's USA. So far, however, there have been few takers.

After You

The problem, says Bruce Cundiff, an analyst at Javelin Strategy & Research in Pleasanton, Calif., is "trying to get over that chicken-and-egg proposition" in which merchants are waiting for the users and vice versa.

Still, Arby's is pleased with its early results. Gavin Waugh, the company's senior director of finance, won't discuss actual numbers but says that "the general trend is positive." But Arby's put the technology in because it was a convenient time to do so, not because it expected to see an immediate benefit. Zimmerman was upgrading the company's in-store point-of-sale (POS) system and decided to add the capability, which cost about $150 per terminal.

Zimmerman says it's challenging to find the tools he needs to manage the contactless readers on a large scale. "Like any new technology, it isn't all there yet," he says. "The real challenge is to be able to deploy it broadly in a big chain with rock-solid reliability."

Even so, Wakefern Food Corp. deployed the technology in its ShopRite supermarkets late last year. A spokeswoman says the chain hasn't seen any quantifiable benefits, nor does it expect any. "The benefits are really for the consumer in its ease of use and convenience," she says.

The San Francisco Giants baseball team is another early adopter. The organization uses the technology in 100 of the concession stands in its home ballpark, AT&T Park. Like Arby's, the team added contactless terminals as part of a major POS upgrade. The new terminals required some integration work. "It wasn't plug and play, that's for sure," says IT director Ken Logan.

McDONALD'S has installed contactless payment systems in all of its restaurants.

Since the kinks were worked out, the new terminals have for the most part operated smoothly. "The only drawback is just keeping people from spilling a beer on it," he says, noting that the terminals sit on the counter for better visibility. "They get pretty dirty and sticky."

So far, less than 1% of the park's transactions have been contactless. "The cards just aren't in the marketplace yet," Logan says. But management plans to upgrade 100 more terminals this year. Next, Logan envisions issuing a season ticket contactless card that would allow entry to the park and is tied back to the customer's credit card for purchases.

Despite the slow uptake, analysts expect adoption of contactless cards to increase. "We see a significant ramp-up from a very low base," says Jonathan Collins, an analyst in the Oyster Bay, N.Y., office of ABI Research. But, he adds, "it won't happen overnight.

"We're seeing great momentum, but we're still in the early stages," says Pam Zuercher, vice president in product innovation at Visa U.S.A.

A major hurdle for banks will be getting retailers other than fast-food restaurants and convenience stores on board. "How are you going to extend that to merchants where the speed of the transaction doesn't really matter? That's the tough business case," says Cundiff. "We haven't seen — and I don't think we'll see in the next two years — widespread acceptance at the grocery stores and Best Buys."

Phone It In

What ultimately may drive acceptance of contactless technology with users, and ultimately merchants, is its integration with mobile phones. Several pilots have been conducted,

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INSECURE CONSUMERS

CONSUMER CONCERNS about security and privacy may be slowing the adoption of contactless payment systems, but they are largely unfounded.

Contactless cards are better protected than their magnetic strip equivalents. Special applications on the embedded chips encrypt data in transit and use what's known as a dynamic card verification value to validate each transaction. The value is similar to the static, three-digit code seen on the back of credit cards. But the chip in each card generates a unique number for each transaction. That number must match what the network expects to see before the transaction is approved.

"The products they're putting out there today, while not impervious, are orders of magnitude more secure than the magnetic stripe cards," says Ken Warren, smart card business manager at Cryptography Research Inc., a developer of mobile security intellectual property.

Still, some consumers may be nervous. Tales of "skimming," where someone with a card reader brushes up against your contactless card or mobile phone on a bus or subway and siphons money out of your account, are already circulating.

That scenario is overblown, says Jonathan Collins, an analyst at ABI Research. "The movie plot threat is that fraudsters can just grab information from the air and use that," he says. But even if that were possible, dynamic verification values would make it difficult to successfully replicate and use a card for illegal transactions.

Moreover, the card associations protect merchants from fraud by guaranteeing transactions of $25 or less without requiring a signature, and consumers are protected by the same liability limitations that apply to standard credit cards.

There's another related concern, however. Consumers give up more privacy as they increase the number and types of transactions they conduct electronically. "Your credit card transactions appear on your credit card statement. Your cash payments don't. It's one more transaction that is linked to an account," says Collins.

But Peter Ho, product manager in the card services division at Wells Fargo, sees that visibility into personal finances as a plus. The bank's online My Spending application categorizes card purchases so customers can see where their money goes, he says.

As the cards are increasingly tied to loyalty programs, and credit card associations and merchant networks link together more tightly, other privacy issues may arise. For example, what information on a shopper's spending habits will a grocery store share – and with whom? Will consumers need to opt in, or at least be able to opt out? These questions still need to be worked out.

Some of these issues may not be resolved until acceptance of contactless payment technology reaches critical mass, which Collins says is still five or more years away. For the card associations, acceptance of new technology is a road they've traveled before. "It's the same problem that Visa and MasterCard had 30 or 40 years ago when they built the network itself," Collins says.

If the past is any indicator, it may take some time before credit cards become fully integrated into the world of wireless payments.

– ROBERT L. MITCHELL

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including one that Atlanta Spirit LLC, the company that operates Atlanta's Philips Arena, completed with AT&T Inc., Nokia Corp., JPMorgan Chase & Co. and Visa last year at the arena. Atlanta Spirit, which is also the parent of the Hawks basketball team and the Thrashers hockey team, is laying the groundwork for another test later this year, says David Lee, vice president of business development. "While contactless is great in terms of ease of use, we think there's a greater proposition by way of the mobile device," he says.

> **We really see mobile as having the ability to deliver payments and payment-related services.**
> **PAM ZUERCHER**, VICE PRESIDENT IN PRODUCT INNOVATION, VISA U.S.A. INC.

Unlike contactless cards and key fobs, mobile phones include a Near Field Communications (NFC) chip set that can work both as a contactless payment card and an RFID tag reader.

Using NFC phones provided by Nokia, 150 Atlanta Hawks and Thrashers season ticket holders who signed up for a Chase credit card could use the cell phones to pay for food or merchandise at 200 POS terminals in the arena.

But Lee was looking for more than hot dog sales. When users passed the phone over RFID tags embedded in posters displayed on the concourses, their browsers were directed to a mobile Web "landing zone" where fans could view and download game information, videos and other content, as well as special promotions. "It's all about getting what's relevant at the time into the hands of the consumer," Lee says.

Beyond POS

Smart phones are central to an overall strategy that includes not just POS payments but also e-commerce and social networking. The NFC phones, Lee says, will become an initiation point for an ongoing dialogue with consumers.

With the price of RFID tags at about 10 cents, tags could appear not just on posters but also on displays or individual items such as Thrashers T-shirts. If the store were out of one size, touching the display with an NFC phone could redirect the shopper to a Web site where he could order that shirt online.

NOKIA phones can be used for contactless payments, but mobile service providers don't yet support the technology in the U.S.

Contactless technology also ties into bank and merchant loyalty programs. Visa, for example, works with merchants to provide information on Visa cardholders who, based on card activity, might be potential customers. Those candidates can receive a promotion or digital coupon via phone as bar-code images that can be scanned at the point of sale, Zuercher says. For such a system to work, the phone must have sufficient screen resolution to allow a scan, and the merchant must have a bar code reader. "It's important to match the coupon type to the consumer handset and to the merchant environment," Zuercher says.

Other aspects of such programs also need to be worked out, says Peter Ho, product manager in the card services division at Wells Fargo & Co. For example, he says, "if the customer uses the [NFC phone] at the grocery store and the sale prices aren't calculated, who does the customer call?"

For Visa, NFC is central to a three-pronged strategy involving contactless payment, NFC-initiated e-commerce over the Web and person-to-person money transfers, says Zuercher. And banks such as Wells Fargo see the technology as another way to link customers to their online banking services. "We really see mobile as having the ability to deliver payments and payment-related services," Zuercher says.

NFC-enabled phones can also function as electronic wallets, allowing users to select which credit card to use for payment and to check account balances online. NFC chips can be integrated into the phone's existing circuitry or reside on a separate card inside the cell phone.

In the past, mobile operators and payment associations wrestled over who controlled the real estate where the application resided, says Ken Warren, smart card business manager at Cryptography Research Inc., a developer of mobile security intellectual property in San Francisco. That has changed. The trend is toward integrating the applications into the phone but allowing banks to manage that piece. "A lot of telecom operators realize that they don't want to be banks and are happy to let the banks keep control of that side of things," Warren says.

But another roadblock to mobile payments is the fact that the major mobile operators in the U.S. aren't fully on board yet. While pilots with phones from Motorola Inc. and Nokia have taken place, the carriers don't currently offer NFC phones in the U.S. "Products aren't coming through the channel," says Peter Wakim, Nokia's director of corporate venturing for the Americas.

> **How do you leave a tip when you pay by [contactless] phone?**
> **DAVID LEE**, VICE PRESIDENT OF BUSINESS DEVELOPMENT, ATLANTA SPRINT

The phone maker will soon offer its model 6131 NFC flip phone directly to consumers online. But until the mobile operators embrace the technology, mass-market acceptance won't come, he says.

Other stakeholders are more bullish. "By 2010, 23% of all middle- and high-end mobile handsets will have the NFC feature on board," says Manuel Albers, director of regional marketing for the Americas at NXP Semiconductors, an Eindhoven, Netherlands-based maker of NFC chips for cell phones.

In a March survey of 800 MasterCard customers, 58% of the respondents said they were interested in having a cellular phone with mobile payment capabilities, and 90% said they would be willing to pay more for a phone with those capabilities. Art Kranzley, executive vice president and group executive of the advanced payments customer group at MasterCard, predicts that "in six months, every network operator will sell phones with near-field capability."

Both contactless technology and the underlying business processes to support it are still maturing. The Philips Arena trial involved four partners, and many details had to be worked out.

"We want everything to tie in on the back end. There was a lot of testing of those components," Lee says. Having a limited number of partners to work with also meant less flexibility. Going forward, Lee would like to offer prepaid cards and expand the trial to more users, once Atlanta Spirit's partners are ready to support them.

A bigger issue for Lee is figuring out how to integrate the technology into current business processes. Functionally, using contactless technology doesn't change the basic transaction. But, for example, "how do you leave a tip when you pay by [contactless] phone?" he asks. Or if the customer orders food from his stadium seat, how do you arrange for pickup at the concession window? "The one thing we can't allow," he says, "is for the technology to get ahead of us."

NO-TOUCH TRANSIT SYSTEMS

WHILE CARD ISSUERS are still waiting for contactless payment to take off in the U.S., the technology has already found a mass-transit niche in other countries. Many prepaid transportation tickets are issued on paper cards that include an embedded contactless payment chip and antenna.

This year, ASK, a manufacturer of paper contactless payment cards in Sophia Antipolis, France, will ship about 20 million of its paper C.ticket cards designed for transportation systems. The cards are in use in more than 20 European cities, says Amand Cochet, vice president of sales and marketing. Pilots are also under way in U.S. cities, including Baltimore, New York and Atlanta. "That's the major market for this type of technology around the world at the moment," says ABI Research analyst Jonathan Collins.

Card issuers like paper cards because they cost about a quarter of what a plastic card costs to manufacture. "It's less expensive to issue paper tickets for the occasional traveler," Cochet says.

That has attracted MasterCard International, which recently announced a joint development agreement with ASK to create MasterCard-branded cards for use in public transit and other applications. "The cost comes down because they produce these in sheets instead of one at a time," the way plastic cards are, says Art Kranzley, executive vice president and group executive in MasterCard's advanced payments customer group.

While the idea of embedding a chip into a paper card that goes into a wallet sounds like a recipe for failure, Cochet says the cards can easily last three months when carried in a pocket or wallet – and longer if carried in a badge holder or other protective envelope.

The technology is also used for one-time tickets at sporting events to combat ticket fraud. "With this, you can identify and control who is coming into the stadium," says Cochet. "Tickets cannot be reproduced."

– ROBERT L. MITCHELL

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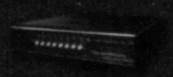

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How to Build a Talent Factory

Growth in the global marketplace depends on putting the right people in the right places fast. But that's easier said than done.

Changing business conditions, the emergence of unfamiliar new global markets and the retirement of baby boomers are converging to produce what **Douglas A. Ready** *and co-author Jay A. Conger call a perfect storm. In an article in this month's* Harvard Business Review, *they write that companies around the world have insufficient pipelines of high-potential employees to fill strategic management roles. But there are a few exceptions. Ready, a visiting professor of organizational behavior at the London Business School and founder and CEO of ICEDR, a global talent management and leadership development research center in Lexington, Mass., talked with Kathleen Melymuka about what differentiates "talent factories" like The Procter & Gamble Co. and HSBC Holdings PLC from the rest.*

Successful companies tie talent management processes to growth strategies. Why is that so important? Let's say your company is offshoring its IT services as a critical component of its growth strategy. Yes, there are rapid growth opportunities, but what if we don't know the key elements of what makes an effective employee in those environments?

We've sat in a number of meetings where the obvious growth trajectory is in these emerging markets. But when it comes to being able to identify talent to follow through on those opportunities, the [room] becomes eerily silent.

You say a focus on both functionality and vitality differentiates talent factories like P&G and HSBC. What do those terms mean? Functionality means, "What you choose to do in your people processes, do well." Make sure it works, and it's designed and executed in support of the strategic and cultural capabilities you're trying to build as part of your competitive strategy. How do you identify potential? How do you build relationships with business schools in targeted emerging markets? What are your assessment processes to tell if people are ready to make next move? These are all critical components of a strategic talent management process.

And what about vitality? Processes can be duplicated, so by itself, process won't enable competitive advantage. It's much more difficult to copy passion. The talent factories' talent management is characterized by deep vitality, defined by a level of commitment right at top. And they're actively involved in workforce planning and processes, and they hold their leaders accountable for developing other leaders. They've gone past slogans to execution. Commitment, engagement and accountability are the drivers. It's much more difficult to duplicate that. Marry those two together — do what you do incredibly well, and believe in your DNA that getting this right is going to really serve you well — and you have a talent factory.

How does a company achieve good functionality? If your strategy is to grow in emerging markets, many companies are left scratching their heads about how to follow through on that. P&G has a global automated tracking system that enables it to identify people with critical competencies and skills and experiences. HSBC has a global talent management council [that] seeks input from councils all over the world on who has high-potential talent and who needs development. When key assignments open up, they can move quickly.

So one company is heavily into the system and one is more into dialogue and the human touch, but they each work their system incredibly well.

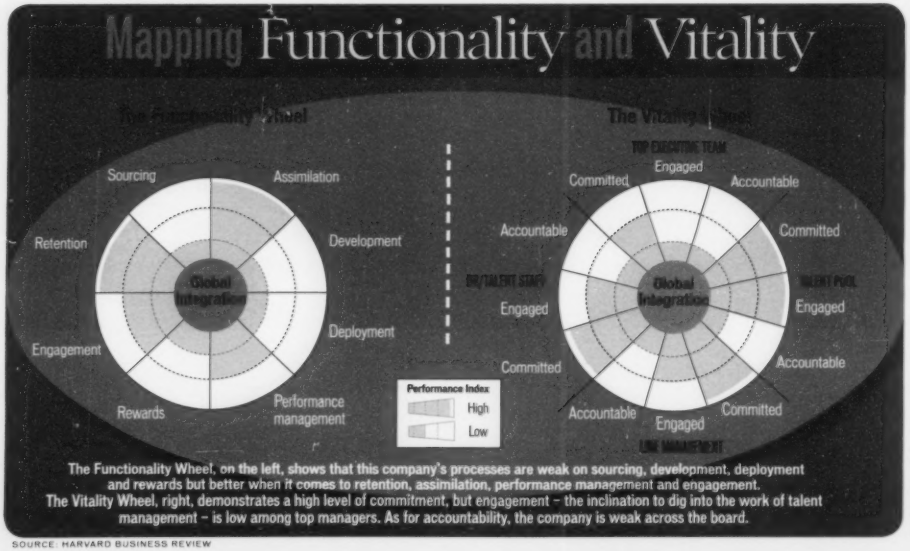
In both cases, somebody's got to put all that information into whatever system they use. Yes. Keeping this vital and the information fresh — that's where the accountability element is critical. People in talent factories are held accountable for developing people.

Neither of these companies is soft or fluffy. They don't have this warm, fuzzy feeling that people are important. They are tough-minded, and this is a pure business strategy.

How can a company build passion and engagement into its talent development processes? It starts from the top. It's incredibly important for the CEO and the top executive team to serve as role models of active engagement and knowledge of the process. I interviewed Stephen Green, the chairman of HSBC, and his eyes literally lit up when he talked about talent management activities. He was able to drill down to three different levels of specificity about what they do, what processes they use. In a company of 310,000, he goes to every new-employee initiation meeting, illustrating how critically important this is to them. You simply can't copy that — or fake it.

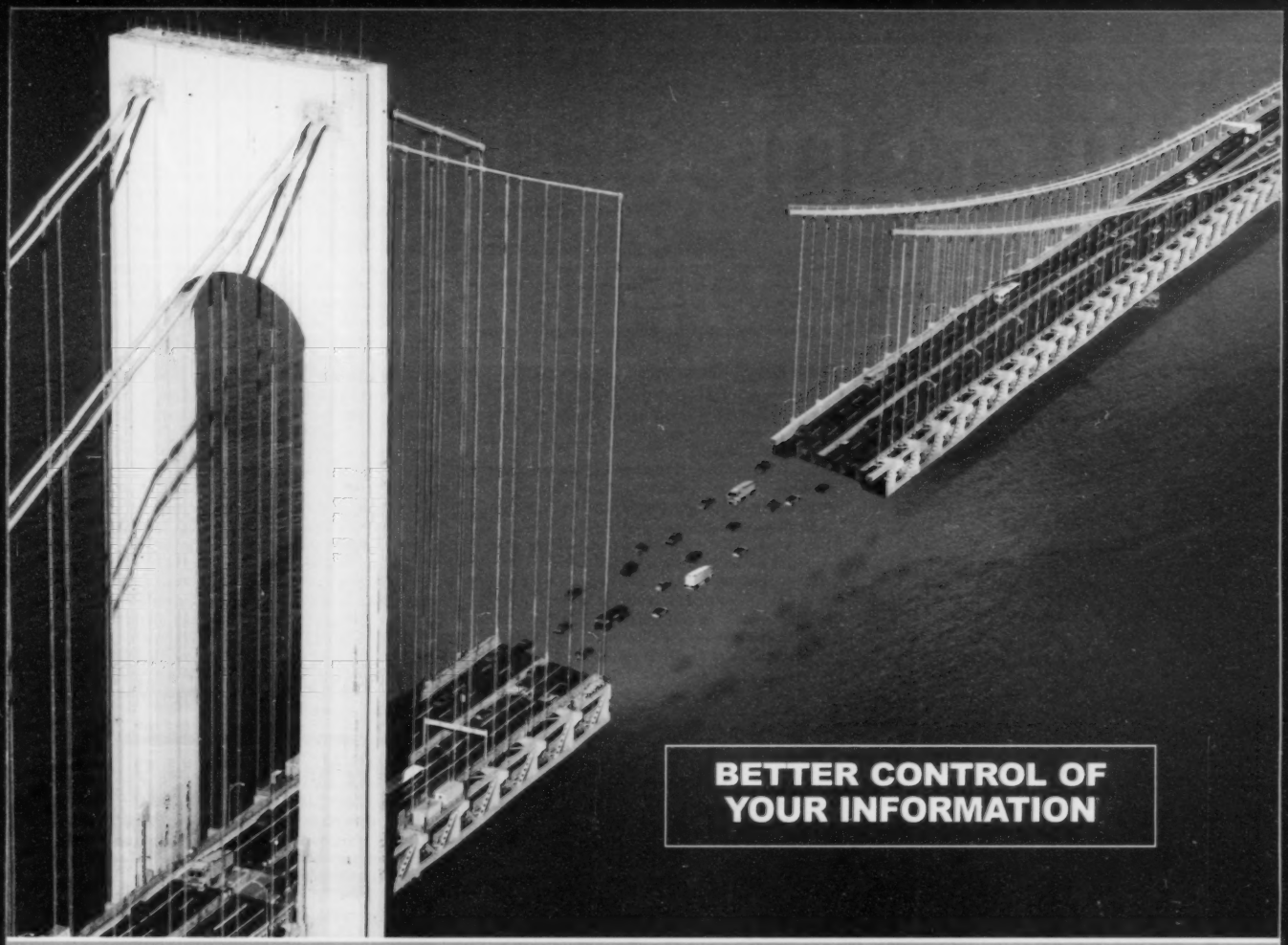
So a key to all of this is commitment at the top. Can a CIO without that kind of CEO leadership build an IT talent factory in his own department? Where the CEO and the top team get it, that's a perfect world. But if you don't have that, it's not an excuse to just sit on your hands. By all means, start with the areas that you can control and influence. There are lots of lessons from talent factories that you can duplicate. Start with your function or region. Then talk up the successes you've had: stronger retention, better accept-to-offers ratios, stronger engagement scores — those can give you confidence that talent initiatives are starting to bring about results. Then colleagues may follow your lead. ▸

Mapping Functionality and Vitality



The Functionality Wheel, on the left, shows that this company's processes are weak on sourcing, development, deployment and rewards but better when it comes to retention, assimilation, performance management and engagement. The Vitality Wheel, right, demonstrates a high level of commitment, but engagement – the inclination to dig into the work of talent management – is low among top managers. As for accountability, the company is weak across the board.

SOURCE: HARVARD BUSINESS REVIEW



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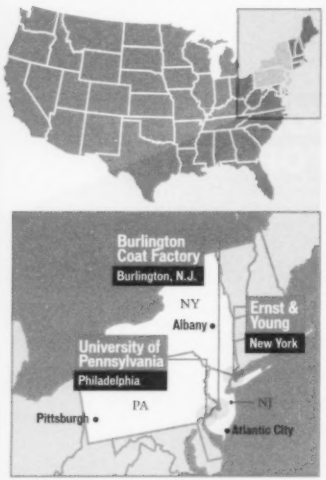
Urban League

BY JENNIFER McADAMS

These Best Places to Work capitalize on their cosmopolitan connections.

WHERE ARE THEY?



BEST PLACES SHOWCASE:
MID-ATLANTIC

Powerhouse cities pepper the nation's mid-Atlantic region, where employment opportunities are growing as fast as the suburbs around New York, Philadelphia, Baltimore and Washington. It's no surprise that the region boosts the median household income for the entire Northeast, which tops the rest of the country, with average earnings of just under $51,000.

Perhaps lesser known is the higher pay rate of women working in this geographic area. Washington and nearby Maryland were among the few locales in the nation where average earnings for women broke $40,000 in 2005, though men working in the same area pull down on average about $10,000 more.

Gender aside, many IT job hunters naturally look to the mid-Atlantic. A number of major organizations are nestled in or near large cities in this area, where public transportation systems are robust and companies help workers strike a balance between fast-paced urban jobs and comfortable suburban living.

Burlington Coat Factory Direct Corp.

- **IT HEAD COUNT:** 275
- **CIO:** Brad Friedman
- **CURRENT IT PROJECTS:** Installation of a warehouse management system; upgrade to an Oracle 10g database for grid computing; development of labor forecasting and scheduling applications
- **CURRENT IT OPENINGS:** Application developers, project managers and Oracle database administrators
- **BIG-CITY ACCESS, HOMETOWN FEEL:** Sandwiched between New York and Philadelphia in Burlington, N.J., Burlington Coat Factory Direct Corp. doesn't offer quite the salaries available in the two nearby cities. Instead, the giant retailer is situated just far enough away to provide a haven for employees who want to be close to — but not immersed in — urban life.

"I love this location," says CIO Brad Friedman. "We are not paying big-city wages, but our employees also aren't commuting in and out of either New York or Philadelphia, so there is not the expense and hustle and bustle of working downtown in a big city."

Indeed, quality-of-life perks rank high with employees. "The staff is offered flexible start and stop times to fit their lifestyle, and we can work from home, as arranged with our supervisor," says Bruce Woods, manager of software quality.

The company also offers hands-on experience with sophisticated technology, such as Oracle 10g, which it is now using to build a grid environment. Many employees are also drawn to some of the interesting IT challenges tied to the retail industry.

"My staff worked recently on a technical solution to help reduce the amount of money our company was losing due to bad checks," says Friedman of his team's efforts to help stem losses among the retailer's 375 stores, which span 44 states. In fact, it's Burlington Coat Factory's combination of new technology, real-world applications and a family-focused environment that allows the company to attract IT talent. "We've been on this amazing growth path that has no end in site," Friedman adds.

University of Pennsylvania

- **IT HEAD COUNT:** 281
- **CIO:** Robin Beck
- **CURRENT IT PROJECTS:** Development of new tools for electronic submission of grant proposals; open-source initiatives that wrap in Web server tools, search engines and voice over IP; identity management applications
- **CURRENT IT OPENINGS:** 10 jobs in the networking and development groups. Details are at *www.hr.upenn.edu/jobs.*
- **IVY LEAGUE PRIDE:** The University of Pennsylvania's Office of Information Systems & Computing (ISC) draws a blend of hard-core sports fans — think Philadelphia Eagles and Ivy League football — academics and IT employees eager to shore up their skills.

As one of the nation's top schools, Penn attracts a variety of talent. "My co-workers come from a wide geographical area and have varying and interesting backgrounds. We are a true microcosm of the larger world," says ISC senior data analyst Amy Miller.

IT projects are also diverse. "We support finance, research, education, facilities, housing, dining, parking, events, fundraising and so on. As such, we offer our analysts interesting business problems to define and solve," says Jeanne Curtis, executive director of administrative information technologies.

Systems analyst Dave Currant details the recent development of a practical Penn IT undertaking. "One recent project was to update the university's online giving site," he says. "This project used several technologies, such as HTML, Java, Oracle back-end systems and an interface to PayPal for credit card validation. We seem to be ahead of other universities."

Penn's status as a major research center helps it stay ahead, says ISC IT technical director Michael Kearney. "Penn continues to be a major player in the Internet 2 effort," he says, referring to the university's role in an initiative called the Mid-Atlantic GigaPop in Philadelphia for Internet 2. MAGPI is a regional effort that uses OC-48 circuits to provide some of the fastest data connections available.

Ernst & Young LLP

- **IT HEAD COUNT:** 1,096
- **CIOs:** Andrew Walsh (Americas) and Karen O'Neill (global)
- **CURRENT IT PROJECTS:** Update of provisioning system for processing new hires; design and deployment of a new document management system
- **CURRENT IT OPENINGS:** Senior IT staff for service-line projects and staff technicians. More openings are detailed at *www.ey.com/us/careers.*
- **LIFE IN THE BIG CITY . . . SOMETIMES:** Though Ernst & Young lists 5 Times Square as its headquarters address, the accounting and financial services firm might well appeal to more than just IT urbanites. The company's flexible policies on staff work hours and locations might also suit those who are drawn to big-city bustle but aren't ready to plunge headlong into Manhattan living.

"The company promotes flexibility in terms of physical location and working hours and does not subscribe to a rigid 8 a.m. to 5 p.m. workday philosophy," says Shawn Horton, area director of technology, Southwest, in Ernst & Young's Americas IT technology support services division.

In fact, IT staffers are integral to this flexibility and spend a great deal of time developing and using collaboration tools, according to Paul Cercere, customer relationship management leader. "Our technology teams constantly look for ways to leverage technology to better enable teams to work together," he says, "whether that means in a single office, city or globally or from one's home or an airport terminal." ▸

McAdams is a freelance writer in Vienna, Va. Contact her at JMTechWriter@aol.com.

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Survey results and feature stories offering practical career advice will be published in the Nov. 12 issue of *Computerworld*. We'll provide detailed information on average salaries and bonuses, broken out by title, industry and region. You'll be able to compare your organization's compensation plans with those of other companies and find the hottest areas of the country for IT pay.

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Career Watch

Lands of Opportunity

Selected cities ranked for high-tech opportunities. Scores are based on percentage of broadband Internet users, employment in high-tech sector, self-employment and patents registered.

1. Tokyo (pictured)	35	7. Toronto	23
2. London	30	8. Los Angeles	22
3. Paris	29	9. Chicago, Shanghai (tie)	17
4. Atlanta	28	11. Singapore	15
5. New York, Frankfurt (tie)	24		

SOURCE: PRICEWATERHOUSECOOPERS, SPRING 2007

ASK A PREMIER 100 IT LEADER

Mark Quigley

TITLE: Senior vice president and CIO

COMPANY: EMC Corp., Hopkinton, Mass.

Quigley is this month's guest Premier 100 IT Leader, answering readers' questions about career development and what makes a leader versus what makes a manager. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com and watch for this column each month.

I have been in computer support for four years and want to move into an area with more responsibility. I have thought about the security field. What should I do to make the transition?

Information security presents many opportunities and a broad range of specialties. The EMC IT security team comes from backgrounds that include networking, application development, server administration and support. Though the range of security specialties is large, fundamental skills such as communication and troubleshooting, plus detailed knowledge of networking and operating systems, are essential in most areas. You need to be a good communicator and problem-solver.

Security is much more than technology. It can involve risk analysis, policy and end-user security awareness. With your background in computer support, you might consider specializing in security-related client-based applications, such as malware defense, personal firewall applications and similar client-based tools. Several great books and Web sites explore these subjects.

And think about getting certified. Certifications such as the CISSP may open more doors for you.

A leader is usually a good manager. Are good managers necessarily good leaders?

No, not necessarily. Certainly, there are good managers who are also good leaders, but the skills each needs are fundamentally different.

Managers focus on achieving specific objectives. They therefore must be skilled in program management, risk management, negotiation and deductive reasoning. Leaders identify the need for change and proactively lead that change. They must be willing to take risks, disrupt the conventional order of standard processes and use inductive reasoning to envision the outcome of changes they wish to initiate.

Managers tend to be more people-oriented, taking care of their staffs and finding opportunities for growth and development so they can remain competitive. Although leaders are certainly aware of the human dynamics involved with the changes they visualize, they are more focused on the bigger picture.

Great managers achieve today's objectives. Great leaders envision tomorrow's opportunities.

PAGE COMPILED BY JAMIE ECKLE.

HOW NOT TO GET THE JOB

CareerBuilder.com recently asked some hiring managers and human resources professionals to share some of the loopiest things they had seen on résumés. Here are a few of the items that some presumably still-unemployed people thought they should include on their CVs:

- The fact that the applicant spends summers on the family yacht in Grand Cayman.
- A letter from the applicant's mother.
- A note that the applicant has limited availability because Friday, Saturday and Sunday are "drinking time."
- The fact that the applicant's sister once won a strawberry-eating contest.
- "I work well nude."
- This explanation for an arrest:

"We stole a pig, but it was a really small pig."

Skills: What You Need

CIOs were asked, "In which of the following areas do you think your IT staff could most use improvement?"

Technical abilities	25%
Project management skills	23%
Verbal and written communication abilities	15%
Organizational skills	14%
Interpersonal skills	12%
No improvements needed	3%
Other/don't know	8%

SOURCE: ROBERT HALF TECHNOLOGY NATIONAL POLL OF MORE THAN 1,400 CIOs FROM A STRATIFIED RANDOM SAMPLE OF U.S. COMPANIES WITH 100 OR MORE EMPLOYEES, MAY 2007

A Rising Tide

According to Dice Inc.'s Annual Tech Salary Survey, average tech salaries in the U.S. increased 5.2% to $73,308 in 2006 from $69,700 in 2005. Some results for specific titles:

Title	2005	2006
CIO/CTO/VP	$104,504	$108,578
Project manager	$93,09	$96,475
Business analyst	$77,158	$82,288
Programmer/analyst	$65,174	$69,757
Systems administrator	$63,698	$64,917
Network manager	$58,434	$62,225
Desktop support specialist	$42,204	$44,909

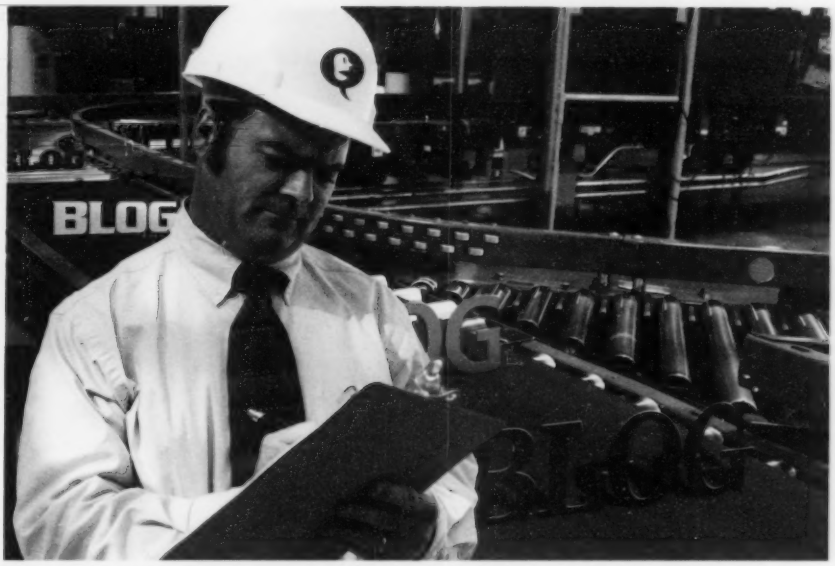
SOURCE: ONLINE SURVEY OF 70,187 REGISTERED DICE.COM AND TECHWARE SUBSCRIBERS, JUNE 1 TO NOV. 30, 2006

5.8M

SOURCE: U.S. BUREAU OF LABOR STATISTICS

Number of high-tech industry jobs in the U.S. in 2006, up by nearly 150,000 jobs from the 2005 level.

Only the good stuff gets through.



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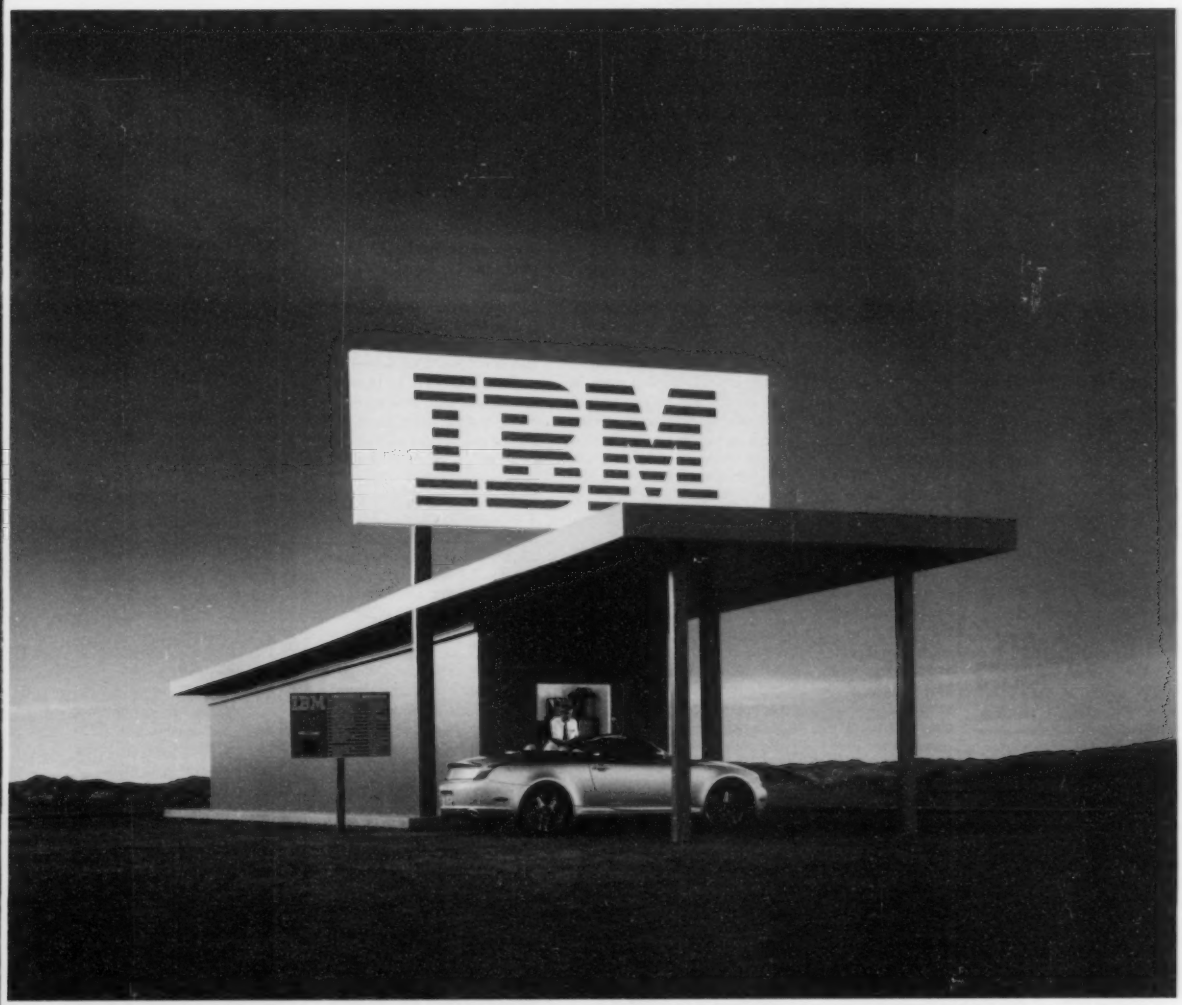

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Drawn to Vegas By Virtualization

At the Interop show, our manager got the scoop on the security implications of virtualization and CMDB. By Mathias Thurman

SECURITY MANAGER'S JOURNAL

A COUPLE OF weeks ago, my boss asked me if I would consider going to Interop. It's my custom to attend the SANS and RSA security conferences each year. But my boss was offering to get me out of the office for a week, in Las Vegas in May. How could I resist? I booked my flight and hotel within the hour.

Conferences can be overwhelming, and Interop had a lot of content on the schedule related to information security, possibly more than for any other discipline. You can feel like a kid in a candy store — you want to be everywhere at once, taking it all in. My strategy is to focus on a couple of topics and then learn as much as I can about them. For Interop, I decided that the topics would be virtualization and configuration management.

Virtual Enthusiasm

Virtualization is nothing new, having been used on mainframes for years, but it's a hot topic at my company right now. We are aggressively virtualizing server environments for almost every new application we deploy, and we're migrating a lot of existing applications to such environments.

Of course, virtualization carries security implications. For example, in typical architectures for Web-based applications, the Web, application and database servers are installed on separate pieces of hardware, each running its own operating system, locked down according to the security baseline and patched appropriately. There are also virtual LANs and firewalls to segment each resource. Firewalls configured for a "rule of least privilege" ensure that the relationships between the Web server, application and database servers are restricted. Usually, there would be no relationship between the Web server and the back-end database server, since the application server would act as a sort of proxy between them. The setup ensures that a compromised Web server won't give a bad guy the ability to launch an attack directly against the database server.

Things are different in a virtual environment. The Web, application and database servers might all be installed on the same piece of iron. The cost savings are hard to say no to, and you might even get a performance boost. But, as speakers noted at Interop, if you don't have controls in place to provide the needed separation of duties within the virtual environment, you could be in trouble.

At Interop, there was a lot of talk about the virtualization concept of the master control server, sometimes called a hypervisor. This is the control center for the virtual environments living on a single piece of hardware. Anyone who compromised the hypervisor would essentially be in control of many of the resources that the virtual environments living on that piece of hardware need access to. In other words, lock down the hypervisor to restrict access by role, or face the consequences.

> If you don't have controls in place, virtualization could give you trouble.

Talkin' CMDB

My other topic of interest was also a natural, since I am in the process of delivering a configuration management strategy for my company. A configuration management database (CMDB) is a repository for information about company assets. In the old days, we used to keep spreadsheets (sometimes we used databases) for that sort of information, entering data for each asset such as type of operating system used, patch level, hard disk size, amount of memory, location in rack and key applications. Today's CMDB is quite different. Once you've entered the basic data, the CMDB can collect very detailed information on things like registry elements of a Windows operating system, the crontab file on a Unix system or an indication that Windows' system accounts can't interactively log into the server.

A lot of CMDB vendors were at Interop, and I learned that most of their tools collect data in one of two ways: by allowing the CMDB system to log into the asset, or by sending out a small software agent that collects the configuration parameters and sends them to the central CMDB server. From what I saw, it seemed that this technology is still in its infancy, but a few vendors, including CA, did have comprehensive offerings.

As I talked about CMDB with various people at the conference, it became clear to me that the technology would be worthwhile only if we make a committed effort to configure and manage the CMDB infrastructure. That could be a big commitment, since we have over 400 production servers running various operating systems, from Windows NT and Windows 2003 Server to multiple flavors of Unix and Linux. Manually collecting configuration items for each server would take a lot of time and manpower, and having programmers script the activity would also require a big-time investment.

I also like the fact that a CMDB can be used to assign relationships with other resources, so that a router, say, could be shown as having relationships with various servers. Then, when it became necessary to make a change to that router, operations would have a heads-up about those relationships and could be on the watch for any issues that resulted on those servers.

From a security and risk management perspective, a CMDB can be used to indicate when security-related system files have been changed from the baseline, and to audit assets to ensure that they meet recommended configurations.

Armed with all the information I garnered on my trip to Vegas, I can now try to persuade upper management to include CMDB in the budget. And now that I know that Interop brings together top-caliber presenters on current and relevant topics, I'll have to see about including another trip to Vegas in next year's budget as well. ▸

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**.

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

Microsoft Joins ID Management Meet

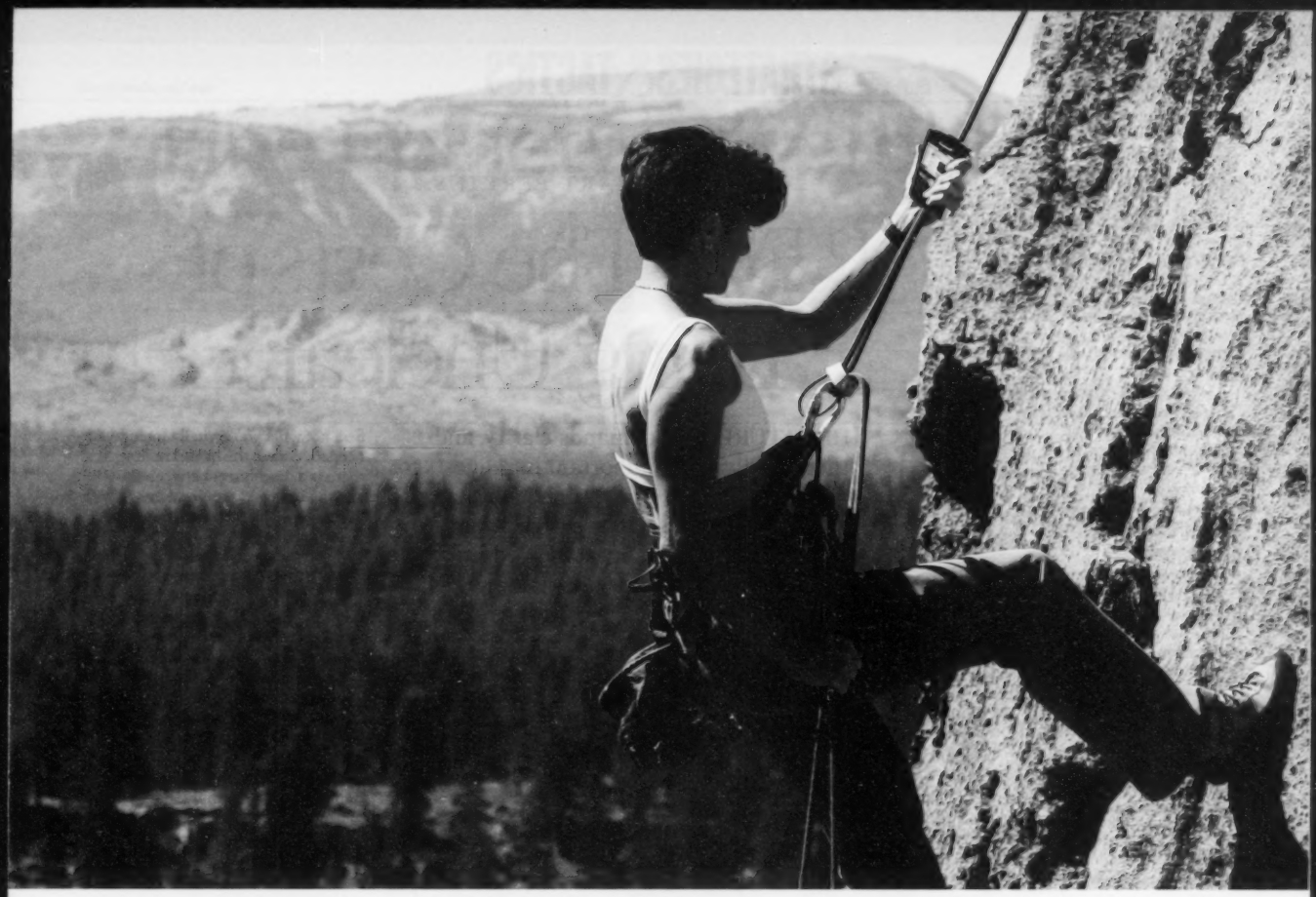
Microsoft Corp. will participate in a meeting this month with vendors and organizations that are backing several different identity management systems. The meeting, part of an initiative called the Concordia Project, seeks improved interoperability between Microsoft's CardSpace and OpenID identity management systems and protocols for identity management supported by the Liberty Alliance, an industry trade group.

Upgrade Promises Security Overview

ElQnetworks Inc. has announced immediate availability of SecureVue 2.5. The software consolidates, correlates and analyzes information, including log, vulnerability, configuration, asset, performance and Cisco NetFlow data, to give administrators an overview of security, according to company officials. Pricing starts at $50,000.

NetIQ Adds Alerts

NetIQ Corp. has announced an upgrade to its security information and event-management software that adds user-access monitoring, real-time auditing and threat detection. NetIQ Security Manager 6.0 with Change Guardian for Windows features user monitoring that provides administrators with real-time alerts of dangerous activities, as well as system change auditing that creates easy-to-read audit trails, according to company officials. The change-detection feature tracks changes made to files, directories, file shares, registry keys and system processes. Version 6.0, due next month, is priced at $800 per managed server.



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www.hrps.org

Project and Portfolio Management

June 18-20, Boston
Sponsor: Gartner Inc.
The Project and Portfolio Management Summit will address topics such as trading money and time for results, building public-sector portfolio management maturity, leveraging customers to improve product development, and balancing project and application development costs, risks and benefits.
www.gartner.com

Postmerger Integration

June 19-20, San Francisco
Sponsor: The Conference Board
Post Merger Integration: Capturing Value Right Away includes presentations on topics such as cross-border integration strategies, managing divestitures, strategic IT integration planning, supply chain management and procurement, legal minefields and long-term measurement of success. **www.conference-board.org**

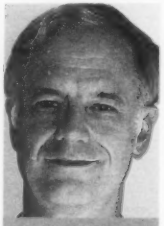
Health Care IT

July 16-17, San Francisco
Sponsor: The Center for Business Innovation
The Fourth Annual Healthcare Unbound Conference and Exhibition will include presentations on the emerging role of personal health records, the role of wireless technologies in health care, telehealth success stories, the challenges and opportunities of tomorrow's technologies, the future of tele-homecare and remote monitoring, disease management applications, data-driven diabetes management and handheld technologies for managing treatments.
www.tcbi.org

BART PERKINS

RFPs: The Costs of Being Unclear

THE NATURE of IT demands clarity, and that's particularly important in requests for proposals. Unfortunately, in today's hurried world, few people take the time to make specifications clear. But fuzzy requirements create misunderstandings. They cost time, money, effort and sometimes political capital. Although it usually takes longer to make a document crystal-clear, the additional time and effort are good investments.



BART PERKINS is managing partner at Louisville, Ky.-based Leverage partners Inc., which helps organizations invest well in IT. Contact him at **BartPerkins@LeveragePartners.com.**

RFPs are expensive to produce and review, but clarity will save you money. Without it, you'll find yourself going back to each bidder with new or different specifications — an expensive and time-consuming exercise. Moreover, RFPs that are unclear generally result in poorly defined service requirements and produce suboptimal results. They increase costs unnecessarily and contribute to disasters down the road. Save money by being clear the first time.

Case in point: In 1999, the Mars Climate Orbital Mission spacecraft was lost as a result of unclear specifications. NASA's investigation of the mishap found that the root cause of the failure was that Mission Control's software used English units of measure, while the spacecraft software used the metric system. Over the course of the nine-month mission, the spacecraft's course had been periodically adjusted by thrusters. By the time the spacecraft reached Mars, it was approximately 170 kilometers closer to the surface than planned. Unfortunately, the difference wasn't noticed until after the spacecraft was lost.

RFPs that are unclear typically cause one or more of the following problems:

- **Low bids.** Unclear requirements may cause some bidders to submit low-priced minimal bids. These providers accept very low margins on the initial requirements but plan to make profits on the inevitable change orders.
- **High bids.** In contrast, unclear specifications cause some bidders (often good ones) to bid extremely high to cover their risk. When part of the RFP is unclear, these providers usually assume that the actual project will require the most expensive options and bid accordingly. If the client later uses less-complex services, has lower volumes or needs less-rigorous service levels, these bidders pocket the difference.
- **No bids.** Fuzzy RFPs force bidders to make numerous assumptions, which increase their risk. This raises concerns about their ability to make a profit, particularly with fixed-price bids. When this happens, even strong suppliers frequently decide not to bid. The result of less competition is that you may incur higher costs or be forced to select a second-class supplier.
- **Incompatible bids.** Not all bidders will make the same assumptions when presented with an unclear RFP. As a result, the final bids may not provide apples-to-apples comparisons.
- **Requirements mismatch.** Fuzzy specifications may result in a supplier bidding on what it *thinks* you specified, not what you actually intended or needed. Unless the bidder realizes that there is a disconnect between the RFP and the intended requirements, it will bid based on its interpretation of your requirements.

When the disconnect is discovered, it may be too late to change the bidder's proposal and still meet your submission deadlines. Even worse, the realization may come after the contract is signed, adversely affecting not only the supplier's ability to deliver, but also your project deadlines.

- **Inability to deliver.** Large, complex RFPs may require more services than a particular supplier can deliver. Some suppliers will bid on the RFP anyway, hoping these holes in their delivery capability will go unnoticed. They assume that if they win the contract, they will figure out how to deliver those pieces later. Unclear RFPs make it harder for your due diligence team to ask questions that will uncover the supplier's delivery problems. If the bidder's weaknesses aren't discovered during due diligence, you may not learn about them until it's too late — and far more expensive to fix. Clear RFPs help weed out those suppliers that knowingly promise more than they are capable of delivering.
- **Rigid contract compliance.** When projects and supplier relationships go south, you can get into "letter of the law" situations and even litigation. In these cases, clarity in the RFP and other project documents can give you important leverage.

The cost of being unclear is higher than most companies can afford. Take extra time upfront to clarify RFP requirements. It will save you — and everyone else involved — time, money and frustration down the road. And it may save your spacecraft, too.

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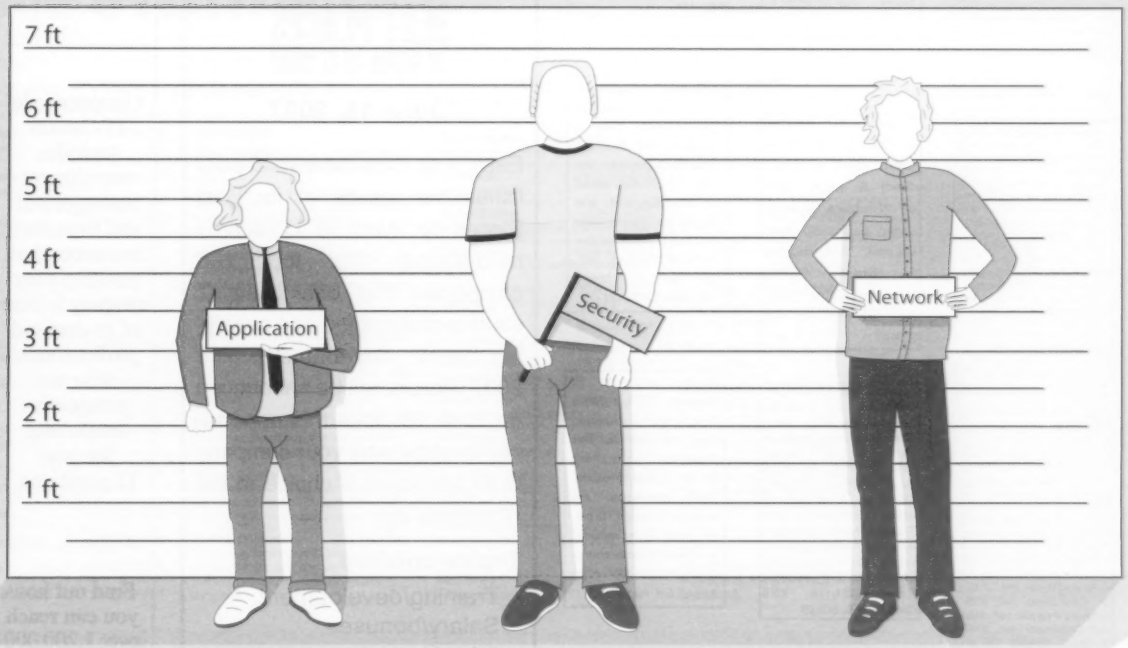
Line up network problems.



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E-discovery

said. "But now we are being pointed in that direction, so we have to take steps to be prepared. You have to be able to show [a federal court] that you can produce everything."

On the advice of the school district's attorney, Middletown school administrators earlier this year ordered that all bidirectional e-mail communications be stored and kept retrievable for at least three years, Attiya said.

E-discovery rules once applied only to "the Enrons of the world," says JAY ATTIYA of the Middletown Township School District.

This summer's e-discovery project will include the installation of EMC Corp.'s VMware virtualization software on 12 of the district's 70 servers running Windows 2000 and 2003, he said.

The VMware software will boost the virtualization capabilities of the district's EMC Clariion AX-100 and CX-10 disk arrays, according to Attiya. The project calls for adding Fibre Channel drives to one CX-10 tray that will be used for virtualized images, and Serial ATA drives in the other tray to support new e-mail archiving procedures.

The district also plans to install CommVault Systems Inc.'s Data Archiver and Data Migrator modules during the summer, Attiya said. The modules will run alongside CommVault's Galaxy backup and recovery software, which is already being used by the school district, he added.

The archiving effort will require between 500GB and 1TB of new storage capacity, which will be provided via the addition of one new CX-10 array and the virtualization capabilities, Attiya said.

According to legal experts, few organizations, regardless of their size, are prepared for the new FRCP rules. For example, 83% of 336 senior technology executives surveyed at the EMC World user conference last month by storage software vendor DiscoveryBox and consultancy Strategic Discovery Inc. said they aren't yet meeting the requirements.

Dire Predictions

A lack of preparation could prove dire for school districts, which often lack technical proficiency, funding and legal expertise, said Robert Ayers, technology coordinator at the Luzerne Intermediate Unit No. 18 regional school authority in Kingston, Pa.

School districts that do complete such projects will improve their ability to defend themselves if lawsuits are filed against them by students, their families or employees, Ayers noted.

Without such capabilities, he said, "what are these people in these districts going to do when approached by law enforcement saying, 'We need to know what John Doe did during third period on Tuesday?' "

Ayers said that this summer he plans to offer eight of Unit 18's 14 districts access to Guidance Software Inc.'s EnCase Enterprise, Automated Incident Response Suite and eDiscovery Suite products to support e-mail retention and retrieval. The tools will be provided to the remaining six districts over the next two years as their contracts with other vendors expire, he said.

Schools must be ready to provide information to law enforcement officials, says ROBERT AYERS of Luzerne Intermediate Unit No. 18.

Richard B. Friedman, a partner at New York law firm Dreier LLP, suggested that school districts first draw up plans of action before diving into e-discovery projects.

"There is clearly the possibility of overreaction to these rules," Friedman said. He suggested that "everybody should be doing everything the rules say because the rules are in effect" but added that "right now, in the real world" the rules aren't yet being enforced.

Friedman said that as federal judges over the next six months become familiar with the technology used to archive files, enforcement efforts will likely become stronger. ▸

IBM Aims to Jazz Up Collaboration With New Technology, Developer Community

BY HEATHER HAVENSTEIN

IBM's Rational Software unit today is set to launch a technology called Jazz, which will be supported by a new developer community and is aimed at fostering the development of tools that bolster collaboration on large projects. At the same time, Rational will unveil the first Jazz-based product.

A Jazz.net Web portal will be opened at the IBM Rational Software Development Conference this week in Orlando.

Developers will be able to use the site to offer IBM input on requirements, report bugs and tweak code posted there. But the site won't be a truly open-source endeavor, because IBM will own any products built using its code, acknowledged Dave Locke, Rational's director of offerings marketing.

IBM described Jazz as a follow-on to the popular Eclipse open-source project that it launched in 2001 and later turned over to the independent Eclipse Foundation.

While Eclipse focused on improving individual developer productivity, Jazz zeroes in on all cycles of the development process and on supporting collaboration among development teams, IBM officials said. They added that the Jazz technology will eventually be incorporated into all Rational products.

Breaking Down Silos

Tony Callan, manager of architecture governance at Blue Cross and Blue Shield of Michigan, said he welcomed the Jazz project, noting that when developers working on different parts of a job work together, the overall project functions more efficiently.

"How do you break those silos down to where everyone is working for a common purpose instead of being scattered?" Callan said. "You need to have tools that will work together to get the testing, requirements and design teams visibility into how things are going."

Ricardo Garcia, a director at Blue Cross and Blue Shield of Florida Inc., said he expects Jazz to help address issues like managing parallel development processes, where collaboration is vital.

"Jazz not only brings the communications channel inside the development platform, but it integrates everything," Garcia said. "The integration with the complete workflow for the life cycle . . . is a big improvement."

Locke noted that IBM also plans to announce at the conference a beta version of the first product built with the Jazz technology. The product, IBM Rational Team Concert, is a plug-in for all Rational development tools that is designed to support collaboration among distributed agile development teams.

Carey Schwaber, an analyst at Forrester Research Inc., said that Jazz will likely make it easier for Rational users to finally get the benefits of collaboration and the improved visibility into project status that IBM "has been promising for a long time."

With Jazz, all users in the development process can use role-based, best-of-breed tools with a single interface to access project data from a single repository, Schwaber said. "People can look at the overall status of the project rather than their little slice of the pie," she noted.

Although the integration among Rational's tools has improved in recent years, it isn't as good as that of some competitors' products and sometimes hinders collaboration, Schwaber said. As a result, Rational has been losing some of its market share to Microsoft Corp. and other vendors, she added.

But Jazz should help Rational regain some of that market, Schwaber said. ▸

New Products

Also slated to be announced at the Rational user conference:

- IBM Rational Portfolio Manager 7.1, which includes an AJAX interface to allow team members to manage work and submit time and expense reports.
- IBM Rational ClearCase 7.01, which can isolate data based on the location of a user.
- IBM Rational Asset Manager, a new product that lets users see how code, patterns and tests are used by dispersed teams.

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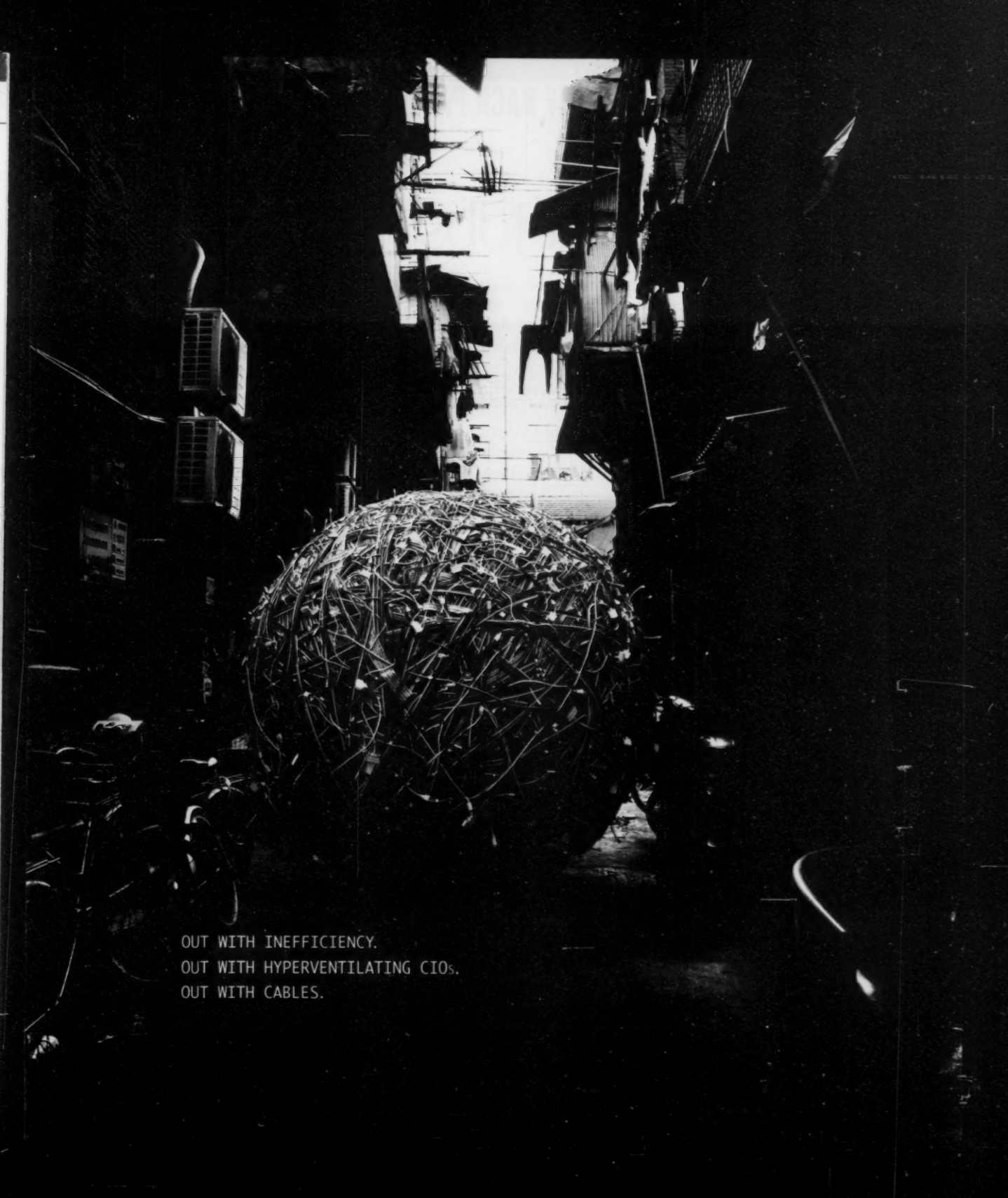
OUT WITH INEFFICIENCY.
OUT WITH HYPERVENTILATING CIOs.
OUT WITH CABLES.

FRANK HAYES ■ FRANKLY SPEAKING

It's All About Jobs

NOW THE BIG STORY is immigration. Well, that's not really true. The big story is jobs. That's what most Americans are concerned about. Not culture wars. Not racial purity. Not abstract notions of globalization. America absorbs every new culture and ethnic group it encounters and grows richer and more complex every time it does. And Americans love inexpensive and high-quality products that come from the rest of the world. In fact, we're addicted to them.

No, for most of us, the immigration story — the immigration debate — is about jobs. And IT is right in the middle of that problem.

Not just because technology vendors are lobbying for more H-1B visas in the new immigration bill in Congress, or because offshore outsourcing is under the spotlight, too.

IT is in the middle of this debate because fear of losing their jobs is why so many people are worried about immigration — and getting rid of jobs is a big part of what we do.

After all, that's what automation is: using machines to replace human workers. When we implement technology that lets a warehouse worker ship twice as many orders or an office worker handle twice as much paperwork, we're eliminating jobs. When we roll out high-speed networks that let sales or management or technical people get more work done from anywhere, we're either getting rid of jobs or making it possible for other people, in other places, to do those jobs.

That's not all. Technology also changes jobs. Even when it doesn't eliminate jobs, it makes old skills obsolete. That provides both a justification and an excuse for replacing expensive older workers with cheaper, freshly educated young workers, including foreign guest workers.

Layoffs, offshoring, age discrimination, immigration — IT people aren't just another group of victims here. We're a primary cause of job loss.

There's no avoiding that. It really is a big part of what we do.

But it shouldn't be the only thing we do.

IT isn't just in the job-elimination business. We're also in the business-creation business.

Yes, we're driving costs — and jobs — out of mature, well-understood business functions. But technology can also create new business opportunities. And when we do that, we're also likely to be creating new jobs.

FRANK HAYES, Computerworld's senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

They won't be the same jobs. They'll require new skills, new training and maybe different people than the ones whose jobs we eliminate. But at least we can be something more than just job destroyers.

There's an irony built into that. What do experienced IT people most fear? That our technical jobs will be commoditized, shipped offshore or automated out of existence.

But that's less likely when we're creating new business instead of just automating.

If you've never grasped why understanding business is as important for IT people as understanding technology, it comes down to this: We can create jobs or just destroy them. And the technology that wipes out other people's jobs will eventually wipe out ours, too — unless we're constantly working to build new business and the new jobs that will go with it.

To create new business opportunities, we have to think not just in terms of technology, but also through a business lens. By combining both ways of thinking, we become more valuable to the business.

That value will make us job survivors — at the same time as we're creating new jobs and making our businesses more successful.

And immigration? Sure, that will still matter, at least for those obsessed with culture or race or globalization. But for most Americans, enough good jobs will render that debate moot.

And for once, IT people can be right in the middle of the solution. ▸

SHARK TANK

Yep, That Would Explain It

It's the 1980s, and this pilot fish is a military programmer who's called over by his boss one morning. "Her terminal wouldn't type properly – she got different letters on the screen than what she typed," fish says. "I looked at the keyboard, then I looked at the guy who sat in front of her, and I smacked him in the back of the head. He turned around and grinned. Just the day before, I had told him a story about someone whose keyboard worked properly when he sat and typed, but wrong when he typed while standing. It turned out the S and D keys were swapped during a repair. When he sat, he touch-typed. When he stood, he looked at the keyboard. My boss apparently looked at the keyboard all the time. I put the S and D keys back where they belonged."

Aha!

Remote user is upset because his shiny new Palm Tungsten won't read a memory card. "The job is delegated to the summer intern, who has the device less than 10 seconds before informing me that he has identified the problem," says support manager pilot fish. "He asks me to eject the memory card. This I do – and out pops a plastic insert."

Cool Fix

Server crashes, and pilot fish determines that the hard drive is toast. "We thought we could just put in a new hard drive and restore from the previous night's backup tape," says fish. "Wrong! Much to our dread, the backups hadn't been working for quite some time. We called the vendor's tech support. The first thing they told us to do was put the hard drive in the freezer. What? Why?" Fish is skeptical that this old trick will work, but he figures he has nothing to lose. Result: "It worked, and we were able to get the server back up and running the next day."

Honesty, Mostly

Independent IT consultant pilot fish has a strict rule: He only works on business computers. "A worker bee at one of my clients asked me to fix his home computer," fish reports. "I explained nicely that I *did not* do home computers. He pleaded his case: While his wife was gone, he had gone where he should have not gone, and he needed to get the computer working again before his wife returned." Fish's verdict: "Honesty is the best policy. Exception: one cleaned home computer."

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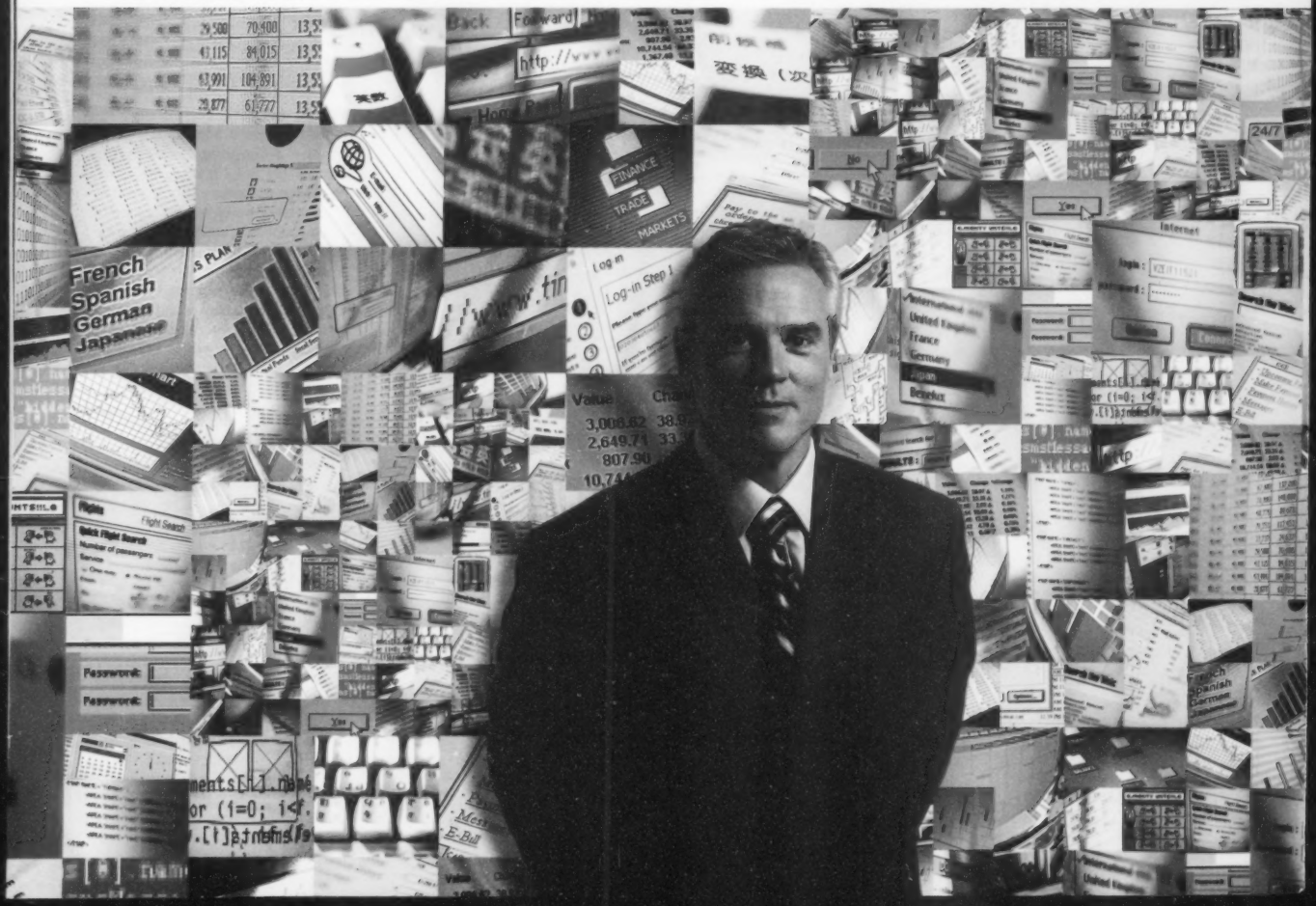
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